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TWO LINE *Editorials*

When he takes a look at the national economy, it must make Mr. Kennedy feel good to realize that nobody really expects him to do all those expensive things he promised during the campaign.

* * *

A Washington expert is quoted as saying that "Conquering outer space will cost an enormous sum of money." Yes, naturally, it would involve some big overhead expenses.

* * *

Maybe it would help us balance the budget if we would demand trading stamps for all the money we spend in foreign aid.

* * *

Some traffic experts are now saying that the slow driver is as great a menace as the speeder. They do not back this up, however, with comparative figures as to the number killed or maimed by slow drivers and fast drivers.

* * *

One good reason for not admitting Red China to the United Nations is kind of people who are insisting that it must be admitted.

* * *

Forty thousand refugees, it is stated, have fled from Cuba to the United States—which proves beyond a doubt that Cuba had (or had) forty thousand very smart citizens.

Washington Report

January 20, 1961

METAL matters were placed on the Congressional agenda in the opening days of the new session. Nevada Senators Alan Bible and Howard Cannon joined in co-sponsoring legislation designed to assist small domestic producers of lead and zinc through a program of stabilization payments. The bill is virtually identical to one passed by Congress last year but which was vetoed by President Eisenhower. Senators Bible and Cannon, poining out that President-elect Kennedy is already on record as favoring the legislation, expressed confidence that the measure wil be enacted into law this session.

Under terms of the bill, which also has as its sponsors senators from Montana, Oklahoma, Kansas and Idaho, small producers in the United States would qualify for differential payments for ores and concentrates not exceeding 2,000 tons of lead or zinc annually. They would be eligible to collect payments by the Secretary of Interior at rates which would support price levels of 14½ cents per pound in zinc and 17 cents per pound on lead.

Tariff Measures Due

Measures to establish sliding-scale tariffs on lead and zinc also are expected to be placed into the hopper at an early date. The approach is expected to be basically similar to an unsuccessful bill proposed in the past session by Senator Robert Kerr (Dem., Okla.). That bill would have provided for imposition of a 2.00c-a-pound duty for lead which would be increased to 3.00c whenever the lead quotation is under 13.50c a pound. The extra 1.00c would be removed whenever the price of lead reaches 14.50c a pound. For zinc, the Kerr measure provided a duty of 1.50c a pound plus another 1.00c when the zinc price drops under 12.50c; the extra 1.00c would be removed when the price goes over 13.50c.

Review Copper Scrap Curbs

A proposal to limit the flow of copper-base scrap exports from the United States was placed before the U. S. Department of Commerce for review with the backing of one group from the copper industry and the opposition of another.

Supporting the proposal at a meeting arranged by the Copper Division, Business and Defense Services Administration, Commerce, were ingot makers, customs smelters, brass mills and brass and bronze foundries. Opposed were scrap dealers and exporters. Proponents of the proposal seek the reimposition of quota controls which last were exercised between 1955-57. Opponents say no restrictions are necessary.

Copper-base scrap consumers have been worried by the increasing export flow — largely to Japan and West Germany. Figures introduced at the meeting showed that total copper raw materials exports in 1959 were $109,000,000, of which $92,000,000 was scrap. In 11 months of 1960, the total was $320,000,000 of which $244,000,000 was scrap.

Quota controls may be imposed under certain conditions if a shortage detrimental to the economy is proved. Final authority for imposition of the controls rests with the Secretary of Commerce.

There was a difference of opinion at the meeting as to whether copper-base scrap is in short supply. Proponents of controls characterized the present level of the supply as "dangerously low." Opponents denied existence of shortage. The quota proponents did not suggest any particular level, leaving that up to the Government. Spokesmen said that the controls should insure that domestic users would have adequate scrap supplies.

Ask Mineral Spending Cut

In his final budget message to Congress, President Eisenhower said the cost of stockpiling and underwriting production of minerals, machine tools and other prdoucts likely to be needed in time of war will continue to decrease. Spending, which was $178,000,000 in the fiscal year ended last June 30, would drop to $70,000,000 this fiscal year and $52,400,000 in 1962. These figures take into account revenues from the sale of some stockpiled items.

Under the budget, nuclear spending would remain at the $2,700,000,000 rate of this and last year, despite a further cutback in uranium ore purchases. The Atomic Energy Commission plans to buy 30,475 tons of uranium concentrates in fiscal 1962. This would be down about 5 per cent from this year. Some 60 per cent will come from domestic sources. Total projected spending on uranium and other atomic raw materials is $578,000,000 compared with this year's $630,000,000.

Stockpile Value Increased

The cost value of materials in 9 federal stockpile inventories as reported by the Agriculture Department, General Services Administration, Office of Civil and Defense Mobilization, and Department of Health, Education and Welfare, on November 30, 1960, totaled $16,183,501,000, according to Sen. Harry F. Byrd (Dem., Va.), chairman, Joint Committee on Reduction of Nonessential Federal Expenditures. November activity in these stockpiles resulted in a net increase of $7,398,000.

Strategic and critical materials are shown in 6 inventories totaling $8.6 billion, including the $6.1 billion national stockpile for which itemized detail is classified. Combined figures from the other 5 inventories show materials (in all grades and forms) leading in cost value as follows:

Aluminum, bauxite, etc., with 7.1 million tons at a cost of $489 million.

Tungsten, with 84 million pounds at a cost of $431 million.

Manganese (and ores), with 4.8 million tons at cost of $331 million.

Seek to Sell Items

The General Services Administration asked Congress for permission to sell limited quantities of several metals from the Federal stockpile.

The agency said these odd lots of metals are no longer needed for defense purposes:

96 short tons of nickel ingots; approximately four short tons of sintered nickel powder; about nine short tons of cobalt metal; 3,431 short tons of nickel-cobalt-copper calcines, and 87 tons of nickel-cobalt-copper matte.

Long Range Outlook Good but

Further Copper Output Cuts Needed

By ROBERT G. PAGE, President, Phelps Dodge Corporation

FOR THE copper producing industry the year 1960 was, on the whole, a reasonably satisfactory one. While in the United States demand was less than exciting, consumption in the rest of the free world far exceeded any previous record, with the result that total free world consumption was substantially greater than the best previous year. Total free world production likewise far eclipsed any previous record, in spite of the loss of nearly 100,000 tons of production from the continuation of the domestic strikes into the early months of the year and the strike in the autumn at Chuquicamata in Chile.

The 1960 recession in the heavy portion of the domestic economy, so evident in the steel industry figures, had its effect on domestic copper consumption. The following table compares domestic consumption in 1959 and 1960. The effect of the recession becomes clearer when one recognizes that the low consumption in the last half of 1959 was caused at least in part by the steel strike.

Domestic Consumption

	1959 Tons	1960 Tons
First Quarter	358,000	314,000
Second Quarter	378,000	334,000
Third Quarter	320,000	296,000
Fourth Quarter	292,000	305,000†
Total	1,348,000	1,249,000

†—Estimated.

The contrast with consumption in the rest of the free world is striking.* The table below, comparing 1960 consumption with 1959 consumption in the free world outside the United States, shows the substantial increase in foreign consumption:

Foreign Consumption

	1959 Tons	1960 Tons
First Quarter	453,000	519,000
Second Quarter	458,000	603,000
Third Quarter	460,000	606,000
Fourth Quarter	488,000	570,000†
Total	1,859,000	2,298,000

†—Estimated.

This represents an increase of 439,000 tons or nearly 24 per cent

ROBERT G. PAGE

over 1959 foreign consumption. It represents an increase of about 390,000 tons, or 20 per cent over foreign consumption in 1958, the previous record year.

Combining our domestic and foreign consumption figures for the year, we find that 1960 consumption of 3,547,000 tons exceeded 1959 consumption by 340,000 tons, or somewhat over 10 per cent.

Turning to production we find that in this country domestic production for 1960 exceeded the strike-torn year of 1959 by 350,000 tons or about 38 per cent. The figures by quarters are as follows:

*Note: Beginning with 1960, several foreign sources for the first time reported production and consumption to the trade associations involved. This distorts all comparisons between 1960 and previous years when unadjusted industry figures are used. Thoughout this article a rough effort — subject to a considerable margin of error — has been made to adjust past figures to take account of the new reporting groups.

Domestic Production

	1959 Tons	1960 Tons
First Quarter	324,000	292,000
Second Quarter	338,000	347,000
Third Quarter	171,000	308,000
Fourth Quarter	94,000	330,000†
Total	927,000	1,277,000

†—Estimated.

If the above estimate for 1960 production is reasonably accurate, production for that year will prove to have been slightly higher than the previous domestic record established in 1956.

In the rest of the free world production also increased — by some 150,000 tons. The figures by quarters are as follows:

Rest of Free World Production

	1959 Tons	1960 Tons
First Quarter	539,000	587,000
Second Quarter	574,000	612,000
Third Quarter	576,000	630,000
Fourth Quarter	577,000	590,000†
Total	2,266,000	2,419,000

†—Estimated.

Combining production in the rest of the free world with that in the United States, we find that 1960 free world produciton amounted to about 3,696,000 tons, an increase of around 500,000 tons, or more than 15 per cent over 1959.

In dealing with consumption, we must remember that for the free world outside of the United States our statistics are based solely on deliveries to fabricators, not on actual use by fabricators. During 1960, the uncertainties as to continuation of African production presumably gave rise to some purchases by fabricators in Europe in excess of their actual consumption. However, even if we consider that deliveries to fabricators represent a true consumption of copper, the available figures indicate an over-production during 1960, on a free world basis, of about 150,000 tons.

Over-Production Weakened Price

This over-production, slight as it was, gave rise to a weakening of the price during the year. The London spot price, substantially above 30c for the first half of the year, dropped during the last quarter to the equivalent of around 28c. In the United States, the E & M J delivered price held at or above 33c during the first three quarters of the year, dropping to around 30c toward the end. That the effect of over-production on price was not more adverse is presumably

due largely to continuing fears of an upheaval in the African producing centers. The possibility of a strike in the Braden mine of Kennecott in Chile seems of less importance psychologically.

The excess of production over consumption during 1960 occurred, not only in the face of a loss of some hundred thousand tons of production due to strikes, but also in spite of curtailment in some of the producing centers of the world. The failure of other important producing groups to curtail was presumably due not so much to a failure to appraise correctly the supply-demand relationship, as to a belief that, in view of African uncertainties, the producing industry might be well advised to do some stock building.

If 1960 was, on the whole, not a bad year for the copper producing industry, nothing of the sort can be said for the domestic copper fabricating industry. A wave of price reductions on fabricated and semi-fabricated articles, touched off in many instances by foreign imports or the threat thereof, brought that industry, by the end of the year, to a point where it was probably doing no better than breaking even.

So much for 1960. What kind of a year will 1961 be? It would take a rash man to prophesize that, and no atempt to do so will be made here, except in the most general terms.

Outlook for 1961

At the end of the year there was no visible sign of an upturn in the domestic economy. Even if we assume that the predicted upturn later on in the year will take place in the United States, it is difficult to foresee domestic consumption for the year 1961 much in excess of that for 1960. Abroad, in the rest of the free world, with the boom showing some signs of at least leveling off in several countries, it is difficult to anticipate any important further increase in consumption over that obtaining in 1960.

Accordingly, barring some catastrophe in Africa, it is again reasonably clear, as it was at the end of 1959, that productive capacity is substantially in excess of probable consumption. The effect of this excess capacity was largely masked in 1960 by the domestic 1959 strikes which carried over into the early months of the year, the Chuquicamata strike in the Fall, some production cuts, and some excess buying by European fabricators conscious of the African problem. As it may be regarded as unlikely that a similar series of events will protect the industry from the consequences of over-production in 1961, the protection necesary can be provided only if the important producers exercise some restraint in their production rates. In this connection it is significant that, while stocks in the hands of producers increased some 130,000 tons during the first eleven months of 1960, about 46,000 tons of that cocurred in October and November.

A year ago at this time it was urged that production curtailments represented a desirable solution from the point of view of the producing industry, as against a policy under which low-cost producers would try to drive the high-cost producers out of business. There is little need to re-state that position. Perhaps two points in this connection are worth making however:

(1) A productive capacity adequate to supply demand during the high periods of the business cycle is desirable, but during other periods (such as the present) it means an excess of capacity which is a problem. The solution is to be found in reasonable curtailments of production, not in the building up of large surplus stocks withheld from the market.

(2) The need for some curtailment, beyond the curtailments already made, is more clearly evident than it was a year ago. Unless action is to be too little and too late, it must be taken with reasonable promptness.

Long-Range Outlook

One can continue to be optimistic as to the long-range growth in copper consumption. This can be predicated upon the continuing growth of population and standards of living. Moreover, the producing industry is taking some praiseworthy steps — perhaps overdue — in the direction of research and promotion, looking toward increased use of copper in the form of both old and new products. Copper Products Development Association, the organization of which was announced late in 1959, was then sponsored only by a small group of producers. Since that time, practically the entire free world copper producing industry has joined to lend its support. Abroad, the principal African producers have formed the Copper Producers Promotion Committee, intended to work with and to help finance the various copper informational and development centers in the principal consuming countries of Europe. Producers from other important centers have been asked to join in this project, and it is believed that a substantial measure of such support will be forthcoming. While no rapid or startling developments may reasonably be expected from these efforts, it is inconceivable that over a long-range period they will not have a substantial effect on the market for copper.

Industrial Use Trend Seen Up for Platinum Metals

"Industrial use of the platinum metals is in a definite long-term uptrend," according to a year-end statement by Charles W. Engelhard, president and board chairman of Engelhard Industries, Inc. He noted further that "while the final Bureau of Mines figures showing 1960 sales to U. S. industry are not yet available, the year just coming to an end may have seen an alltime record for these precious metals and 1961 is shaping up as another good year in this field."

Latest available Dept. of Commerce statistics show a nine-month total for sales to consuming industries of the platinum group metals—platinum, palladium, iridium, rhodium, ruthenium and osmium—of 577,200 troy ounces in 1960 as compared to 558,500 ounces for the same period in 1959, which was one of the best years on record for the industry.

Mr. Engelhard's prediction for the coming year was said to be "not only based on the factors unique to platinum which pushed sales of this precious metal to high levels in 1960, but also on confidence that the new Administration will prove a healthy one for United States business and Industry."

Noting that the overall expansion of the American economy together with the pressure of rising population are creating beneficial long run effects for all materials including platinum, Mr. Engelhard stressed the trends that apply particularly to the precious metals.

1960 Import Experience Showed

Lead Quotas Not Restrictive Enough

By CHARLES R. INCE, Vice President and Sales Manager, St. Joseph Lead Co.

THE Tariff Commission's report to the President on October 1, 1960, and the Administration's subsequent action in continuing quotas for another year at their present level of 80%, was an empty gesture so far as the lead mining industry was concerned. The report of the Tariff Commission that "developments in the trade in lead and zinc do not indicate a change in the competitive situation" about epitomizes the metal situation as it existed in 1960. As in the previous year, it was apparent in the light of reduced consumption that the import quotas were not restrictive enough and excessive imports pressed upon the market. Although the domestic price held at 12c a pound through most of the year, it was only sustained by an eight-months' strike at the smelter of the third largest producer, which removed about 8,500 tons a month of lead production from the market.

The optimism which ushered in the "soaring sixties" carried over into lead and forecasts early in the year were pretty general that lead consumption would be higher than 1959. As we now know, to our disappointment this improvement did not materialize and, as the Federal Reserve Board Index of Industrial Activity declined from a January high of 111 to a low of around 105 at the end of the year, the use of lead, following as it usually does the general industry's pattern, also dropped and total consumption for the year was around 1,035,000 tons—a decline of 5% from the previous year. Coupled with the liquidation of inventories by consumers, this meant a backing up of lead production at the smelters where stocks increased by close to 30,000 tons during the year.

Abroad, the situation was better than in this country. The improvement in consumption which has been apparent in the last few years continued into 1960, and for the first nine months the O. E. E. C. (Organization of European Economic Cooperation) countries reported a consumption of 755,000 metric tons, roughly 10% above the previous year's rate. Despite this improvement in use of the metal an unbalance still existed between production and consumpton, and the excess supply accounted for a decline in the London Market from £68 (8.5c) at the beginning of the year to £62 (7.75c) at the end of the year. The equivalent New York prices, taking into consideration the current duty of 1-1/16c a lb. and freight to U. S. ports, would be between 9.75c and 10c a lb.

CHARLES R. INCE

Domestic Price Decline

In view of the generous import quota on metal, it is obvious that the domestic price of 12c could not have been maintained if it had not been for the Bunker Hill Smelter strike and close down of mines in the Northwest. With the settlement of these labor difficulties the price declined 1c a lb. and at 11c as the year ended, was still 1c to 1.5c above the world market.

How long this disparity can be maintained is a question. An improvement in consumption whereby the excess imports would be absorbed is a possibility. Tighter import quotas or an increase in tariffs on metal and concentrates is another possibility, although at this time not knowing the tenor of the incoming Administration's feeling on the subject, this is an uncertain alternative.

A solution might lie with the United Nations Lead-Zinc Study Group which had two meetings during the past year, at both of which it was recognized that lead presented more of a problem than zinc. The action taken at these meetings of withholding lead from the market without actually curtailing mine and smelter production has not solved the problem. With consumption abroad still at a very good rate despite the decline in the United States, there was little inclination at the September meeting of the United Nations Group to alter the action taken earlier in the year, but now that there are signs that even abroad business is beginning to fall off, it is hoped that at the forthcoming third meeting of this Group in March, something more concrete will be evolved to bring world production more in line with consumption.

U. S. Consumption Lower

To revert to our domestic situation, which basically is the crux of the lead problem since we represent nearly 50% of the Free World's consumption, it is apparent that our earlier anticipation of a 5% increase in consumption over 1959 but a resultant actual decrease of 5% accounted for around 100,000 tons of surplus lead in the Free World's lead balance. In this country, the surplus amounted to 27,000 tons due to

the aforementioned decline in consumption and an increase in the available supply. The drop in consumption was not shared equally by all segments of the lead fabricating industries. (See Table I.)

Tetraethyl lead which now includes tetramethyl as well, reversed a decline of the last few years and actually showed a slight increase of 3.4% over 1959. This was not too surprising in view of the fact that the newest anti-knock fluid, tetramethyl, contains a higher percentage of lead, 75.5%, as compared with 64.0% in tetraethyl fluid. Furthermore, the octane number of gasoline continued to rise throughtout the year both in the premium and regular grades, despite the impact of compact cars which can use either high-test or regular gasoline.

The battery industry, the largest consumer of lead, about held its own with shipments of automotive replacement batteries running close to the second highest on record through the third quarter. With new car production at 6.7 million during the year, this could mean the highest S. L. I. (Starting, Lighting, Ignition) battery production on record. However, industrial batteries suffered with the decline in business and the total use by the battery industry was about par with the previous year. The fuel cell still is a potential threat to the storage battery, chiefly of the industrial type, but it had no appreciable impact in 1960. On the other hand, the possibility of an electric-storage battery-powered passenger car and the increased use of electric-powered delivery trucks, indicate an expanding use for lead in this field. Despite higher initial investment in the equipment, the cost of running an electric-powered truck is approximately one-quarter that of the gasoline-driven vehicle. Similarly, a joint study by Exide and the Lead Industries Association, showed that the same situation exists with respect to battery-powered industrial trucks. Despite higher initial investment, operating and maintenance costs were considerably lower than gas-driven equipment.

TABLE I

Lead Consumption by Industries

	1959	1960	% Change from Previous Year
Storage Batteries	380,800	382,000	+ .5
Tetraethyl Lead	160,100	165,000	+ 3.4
Cable Covering	61,200	60,000	— .2
Construction	134,000	123,000	— 8.6
Pigments	103,700	98,000	— 5.2
Solder	68,900	58,000	—15.8
Ammunition	45,300	43,000	— 5.1
All Others	136,500	106,000	—22.0
	1,091,100	1,035,000	— 5.1

TABLE II

Lead Metal — Balance Sheet

	1960	1961 (estimated)
Consumption	1,035,000 Tons	1,075,000 Tons
Supply		
Primary Smelter Production	395,000	450,000
Secondary Production	445,000	460,000
Metal Imports*	222,000	222,000
	1,062,000	1,132,000
Surplus	27,000	47,000

* Allowable quota.

Cable Covering

Aside from these two major applications of lead, all other uses showed a decline from the previous year. Cable covering accounted for a slight decline despite the increased use of electric power throughout the nation. The decrease was a minor one amounting to less than 1% as compared to 17% in 1959, and could be attributed in part to the project undertaken by the Lead Industries Association-Expanded Research Program in successfully extruding improved lead alloys on the continuous type of extruder which lowers the cost of lead sheathing of cable as well as elminating manufacturing imperfections which were encountered with the older type ram extruder. While it is too early to be sure, it looks as if the industry may have stemmed the loss of their markets to other materials in this field.

The use of lead in the construction field fell off as all types of construction declined from their 1959 peaks. While new construction expenditures for the first half of the year were below the 56.2 billion average for the previous year, there was a marked pickup in the value index of construction contracts in the last half of the year which augurs well for the future. The 8% drop in lead consumption in this field might well be overcome during 1961, particularly in view of the increased use of some of the newer applications of lead such as anti-vibration pads and low temperature fluxing enamels for coating steel and aluminum sheet.

Pigments were another area in which lead registered more than an average decline—dropping about 5% from the previous year's usage. White lead—dry and in oil—showed the greatest decline whereas litharge was not too far off from the comparable period of the year before, sustained by the battery industry's activity. Red lead was the exception to the general rule and showed a slight increase which is a tribute to the research work being done by the Expanded Research Program on this pigment in paint formulatons and new applications.

Lead Use in Solder

Solder registered a major loss of nearly 16%. While automotive production was up materially, the large proportion of compact car production adversely affected the quantity of body solders and radiator solder, which normally account for 9 lbs. per unit in a standard size car. Of course, the lesser building activity also contributed to the decline in the use of solder for plumbing.

The ammunition field which normally accounts for between 4% and 5% of total lead consumption, also

(Continued on Page 14)

U. K. OBSERVERS SEE COPPER OUTPUT CUTS NEEDED IF PRICES ARE TO HOLD AT SATISFACTORY LEVELS

Tin Quotations Decline Due to Poor Consumer Demand; Lead Slips to Lowest Point Since 1946; Study Unit May Consider Zinc Restrictions

By L. H. TARRING
London, England

ALTHOUGH for the first two or three weeks of December the London copper market continued to be affected to some extent by a fairly tight technical position as deliveries against earlier purchases were taken into strong hands, the general trend of prices was downwards; the month closed with quotations nearly £10 below their best level, and some £30 below the price ruling at the end of 1959. The last week of the year is nearly always a quiet period as far as consumer demand is concerned owing to the Christmas holidays and annual stocktaking at a number of consuming works, and as in the U. K., this was rather more pronounced this year than has so far been the case owing to the fact that the business outlook in some directions is rather uncertain. The motor car industry continues to be somewhat depressed, shipbuilding is unsatisfactory, and some of the consumer goods industries are also experiencing dull trading conditions, and production for stock has now been carried about as far as possible.

The reduction in the bank rate was not unexpected, but has had little immediate effect on the industrial position. Although it is anticipated that in the closing weeks of the year consumption here was below the peak, the year as a whole must be considered a good one, as in the first ten months U. K. consumption was 85,000 tons ahead of the previous year at nearly 600,000 tons (including secondary).

Progress in the wages negotiations at Braden's El Teniente mine in Chile were followed closely, but although it was fairly generally believed here—and for that matter still is at the time of writing—that there will be a strike, this had little effect on prices. The serious strikes in Belgium at the end of the year have obviously interfered a good deal with industrial activity in that country. The big copper smelter at Olen has also so far not been affected so that output has been maintained, but demand may have suffered to some extent. As regards the rest of the Continent, consumption seems to be running in fairly high gear, but there has not been much indication of further progress in recent weeks, and it is felt that the maintenance of the current rate of consumption is about all that can be anticipated for the time being. Conditions in the Congo are still extremely unsatisfactory, but here also copper output seems to have been maintained at normal levels so far.

U. S. Major Factor

The continued lack of improvement in the American domestic market is obviously a major factor in the rather easier tone of copper generally, as the limited rate of domestic buying has resulted in a good deal of copper being sold for export from the U. S. A. at pretty competitive prices. Hopes are entertained that the new President will be able to act quickly to improve commercial and industrial sentiment, but at best this is likely to take some months. In the meanwhile the troubled situation in Cuba and nervousness over the Eastern position as the result of developments in Laos, have made the possibility of some increase in defence spending a factor to be borne in mind.

The continued high rate of Japanese buying of copper concentrates and scrap on the world market, to which reference was made a month ago, is still affecting a good many countries, and it is interesting to note that even in the U. S. A. attention has recently been drawn to the possibility of a shortage of copper scrap as a result of the high rate of exports, notably to the Far East.

Current indications are that world productive capacity in 1961 will be well ahead of probable requirements, and unless very large tonnages are lost as a result of strikes, continued and possibly extended output cuts by producers may be necessary if prices are to be held at satisfactory levels.

Few Changes in Tin

There have not really been any striking developments in the tin situation during the past month, though on balance prices have lost

U. K. COPPER STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports U. K. output of primary refined copper in October as 9,068 tons (12,959 tons in Septmeber) and 9,091 tons of secondary refined (10,604 tons).. Blister (rough) production was 505 tons. Stocks at end October included 96,469 tons of refined and 21,564 tons of blister, against 93,460 tons and 16,840 tons respectively a month earlier. Of the refined stocks consumers held 38,062 tons (41,188 tons). Consumption was rather lower in October at 62,372 tons (65,748 tons) and was made up as follows:

Unalloyed Copper Products	Oct. 1960	Jan.-Oct. 1959	Jan.-Oct. 1960
Wire*	23,184	183,887	224,150
Rods, bars and sections	1,784	16,110	17,449
Sheet, strip and plate	5,209	47,657	51,397
Tubes	6,929	54,634	60,548
Castings and misc.	650	6,500	6,500
Alloyed Copper Products			
Wire	1,865	14,790	17,510
Rods, bars and sections	14,073	113,398	136,400
Sheet, strip and plate	9,816	84,057	97,022
Tubes	2,035	18,066	18,941
Castings and misc.	7,602	60,857	72,895
Copper sulphate	2,326	27,218	23,647
Total all products	75,473	627,174	726,459
of which:			
Cu content	62,372	512,765	598,146
Consumption refined copper†	47,498	386,935	454,805
Consumption of copper and alloy scrap‡ (Cu content)	14,874	125,830	143,341

* Consumption of H. C. copper and cadmium copper wire rods for wire and production of wire rods for export.
† Virgin and secondary refined copper.
‡ Consumption of copper in scrap is obtained by the difference between copper content of output and consumption of refined copper, and should be considered over a period since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

U. K. TIN STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics U. K. production of tin in October fell to 1,903 tons primary and 24 tons of secondary from the previous month's figures of 2,730 tons of primary and 22 tons of secondary. Stocks showed a slight decline at 11,248 tons (11,550 tons the previous month, of which consumers held 1,381 tons (1,328 tons)). Tin consumption in October showed a decrease at 1,951 tons against 1,983 tons a month earlier. Details are as fololws:

	Oct. 1960	Jan.-Oct. 1959	Jan.-Oct. 1960
Tinplate	938	8,198	9,459
Tinning:			
Copper wire	41	446	403
Steel wire	10	88	94
Other	74	653	683
Total	125	1,187	1,180
Solder	165	1,886	1,693
Alloys:			
Whitemetal	270	2,480	2,492
Bronze and gunmetal	236	1,725	2,065
Other	40	363	390
Total	546	4,568	4,947
Wrought Tin*			
Foil and sheets	22	273	233
Collapsible tubes	15	201	217
Pipes, wire & capsules	3	30	29
Total	40	504	479
Chemicals and other uses†	137	1,195	1,267
Total all trades	1,951	17,538	19,025

* Including Compo and "B" metal.
† Mainly tin oxide and tin compounds.

AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC

(Per Long Ton)

Mean of Bid and Asked Cash Quotation at Close of Morning Session on London Metal Exchange

	COPPER			TIN			LEAD		ZINC	
	Cash	3 Months	Settlement	Cash	3 Months	Settlement	Current Month	3rd Following	Current Month	3rd Following
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1960										
January	259 5 3	246 8 9	259 12 0	791 7 6	787 11 0	791 14 0	74 15 8	74 10 6	94 11 5	91 14 11
February	263 17 5	245 17 6	264 5 0	792 7 5	790 3 10	792 15 3	73 17 3	73 15 6	88 17 2	88 18 5
March	253 5 4	237 14 10	253 11 4	787 11 0	786 15 0	787 17 10	76 5 4	75 7 4	90 3 2	88 17 12
April	262 2 1	244 15 0	262 8 5	790 11 4	785 5 0	790 18 11	77 10 6	76 11 5	92 8 7	89 15 11
May	248 4 8	243 0 3	248 9 7	785 1 4	784 0 0	785 7 9	77 8 3	76 16 6	92 1 11	91 9 1
June	250 15 0	244 2 6	250 19 3	793 5 0	789 3 4	793 11 5	73 7 6	74 0 8	90 11 11	90 3 10
July	254 11 7	246 19 5	254 16 11	812 10 3	808 9 9	812 16 8	71 4 10	72 0 7	90 4 8	89 15 11
August	254 3 2	243 14 7	245 5 11	801 12 3	803 10 3	802 0 11	70 19 0	71 7 1	87 8 7	87 9 2
September	234 14 1	235 5 3	234 16 7	804 18 8	802 15 8	805 7 3	69 18 11	70 4 11	87 2 9	86 8 11
October	222 4 8	224 1 5	222 7 2	804 7 2	798 2 2	804 14 9	67 5 0	68 13 7	87 18 3	86 12 5
November	226 6 11	225 12 7	226 9 7	800 12 3	797 19 1	800 19 1	68 3 6	68 17 6	87 12 9	86 17 3
December	230 19 8	228 3 5	231 2 3	795 9 0	793 13 9	795 14 6	64 19 6	66 3 11	82 15 3	82 14 11
Year	245 15 7	238 14 10	246 0 1	796 13 2	794 0 10	797 0 4	72 2 11	72 7 5	89 5 11	88 8 2

over £10 a ton owing to the poor levels of consumer demand in the last week or two. As expected, the International Tin Council decided to leave exports unrestricted for the first quarter of 1961, and all the statistical forecasts for the present year point to production falling short of consumption. However, in this connection it is perhaps wise to be a little cautious as it is not certain that total consumption will come up to earlier expectations. Apart from the slackness in the big U. S. tinplate industry, British producers have experienced a falling off in demand for tinplate recently, and the largest, the Steel Company of Wales, has for the time being reduced operations to a four-day week, and in doing so has admitted that many of its customers are rather heavily stocked. In accordance with expectations, most of the producing countries, and a number of consuming members have ratified the second International Tin Agreement, so that this is now certain to come into operation in July. An Interim Committee has been formed to pave the way for a smooth transition from the first to the second post-war agreement.

Just recently the tension in Laos created a certain amount of nervousness over the Eastern situation generally, but this had only a mild effect on the tin market, prices rallying a pound or two a ton. There was no indication that consumers generally were feeling alarmed as the volume of demand did not increase very noticeably.

With the news of the considerable sums which are being made available to Bolivia for the rehabilitation of her mines, it is to be presumed that production there will pick up again in due course, but how soon this can be expected is impossible to say.

Lead Prices Drop

Nothing has occurred recently to improve the unsatisfactory outlook for lead, and indeed during December prices slipped back further to the lowest level since 1946. The settlement of some long standing strikes in America suggests that the supply position there may become top-heavy again, and this no doubt was partly responsible for the drop in the domestic price. Outside the U. S. A., producers stocks have continued to increase, and it is obvious that the International Study Group faces a difficult problem at its next meeting in March. Not only have lead prices fallen to a level much below that which producers consider reasonable, but the setback in zinc quotations latterly has obviously aggravated the position for those concerns producing both lead and zinc concentrates.

European consumption in 1960 is believed to have shown a moderate increase over 1959, but there is likely to be a falling off in the United States, and overall supply continues to run ahead of demand, despite the quantities held off the market for the past 18 months or more. Even moderate tonnages of foreign lead offered on the Metal Exchange have tended to depress prices, and there are indications that other producers have been prepared to accept less than the L. M. E. quotations for metal that has experienced difficulty in finding a buyer.

It seems obvious now, since any growth in consumption in 1961 is problematical, that if a measure of confidence is to be restored in this market, actual output cuts will need to be made in a number of directions. Unless this is done, the possibility of prices sinking even lower cannot be ruled out of consideration.

A development which has aroused some interest here is the fact that from the beginning of 1961 the Lead Development Association and the Zinc Development Association will share the same Director-General, in the person of Mr. R. Lewis Stubbs, O. B. E., who has headed the Zinc Development Association for a good many years, and is well known in international metal circles. It is thought that this may presage more active promotional work on behalf of lead.

The final changeover to the new

(Continued on Page 14)

U. K. LEAD STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports that U. K. stocks of lead at the end of October were 52,592 tons imported refined and 7,626 tons English refined compared with 49,054 tons and 9,103 tons respectively at the end of September. Production of refined lead was down at 7,662 compared with 8,318 tons the previous month; consumption was also down at 25,010 tons against 34,274 tons a month earlier. Details of consumption are given below:

	Oct.	Jan.-Oct.	
	1960	1959	1960
Cables	7,291	78,652	78,542
Batteries — as metal	3,177	24,583	33,085
Battery oxides	3,319	22,115	30,018
Tetraethyl lead	2,850	19,151	21,846
Other oxides and compounds	2,204	22,357	23,184
White lead	762	6,771	6,780
Shot (incl. bullet rod)	483	3,317	4,611
Sheet and pipe	6,602	57,267	61,958
Foil and collapsible tubes	336	3,058	3,460
Other rolled and extruded	804	5,661	7,221
Solder	1,384	12,148	13,303
Alloys	1,850	14,958	17,505
Miscellaneous uses	1,618	11,514	14,066
Total consumption	32,680	281,552	315,579
of which:			
Imported virgin lead	16,921	143,281	160,324
English refined	8,089	62,454	74,951
Scrap including remelted	7,670	75,817	80,304

U. K. ZINC STATISTICS

During October, reports the British Bureau of Non-Ferrous Metal Statistics, the U. K. produced 5,291 tons of virgin zinc (6,472 tons in September and consumed in all forms 30,598 tons (33,163 tons). Stocks at October 31st totaled 49,871 tons (52,717 tons), of which consumers held 18,703 tons (20,697 tons). Details of consumption are as follows:

	Oct.	Jan.-Oct.	
	1960	1959	1960
Brass	10,563	99,033	103,485
Galvanizing	8,341	86,801	82,334
of which:			
General	3,011	30,916	29,267
Sheet	1,999	21,446	19,886
Wire	1,973	18,311	18,699
Tubes	1,448	16,128	14,482
Rolled zinc	2,026	22,003	20,738
Zinc oxide	2,336	25,883	22,250
Zinc diecasting and forming alloy	5,122	50,844	54,529
Zinc dust	1,154	10,916	11,940
Miscellaneous	966	9,867	9,463
Total consumption	30,598	305,347	304,739
of which:			
Slab zinc			
High Purity (99.99%)	5,628	55,086	59,754
Electrolytic & high grade (99.95%)	5,154	57,440	55,268
G.O.B. Prime Western & debased	11,680	111,985	111,229
Other virgin material	312	2,556	3,248
Remelted zinc	621	5,349	5,608
Scrap—Zn content, zinc metal, alloys and residues	2,750	29,635	26,582
Brass and other copper alloys	4,453	43,296	43,050

DOMESTIC COPPER PRICES REDUCED 1.00c TO 29.00c; OUTPUT CUTBACKS SEEK TO BALANCE SUPPLY, DEMAND

Chaotic Market Conditions in Zinc Result From Controversy Over Granting Of Discounts — Quotation Is Cut by 0.50c; Lead Is Steady at 11.00c Level

January 23, 1961

THE New Year did not start on a happy note for the domestic metal markets. Copper prices dropped 1.00c a pound as supply continued to exceed demand and widespread output cutbacks were announced to help correct this imbalance. Zinc quotations were cut 0.50c a pound during a period of unprecedented market confusion in the wake of controversy over discounts from published quotations. Lead remained steady and quiet with prices unchanged.

Copper prices were reduced 1.00c a pound to 29 cents a pound by custom smelters on January 12. Kennecott cut its price by a like amount to the same level effective January 17 and other producers followed. It was Kennecott that dropped the price from 33.00c to 30.00c on October 12, 1960. Not since February 1959 has the producers' price been as low as 29.00c delivered. That quotation prevailed from October 24, 1959 to February 2, 1959 and on the latter date some producers went to the 30.00c level

Convinced that a cut in price by itself will not rectify the imbalance between supply and demand, several leading producers announced curtailments in production. Among those acting were Anaconda, which cut its output 10 per cent in the United States and Chile; Kennecott which went from a 7-day to a 6-day week at domesitc mines; Southern Peru, which reported its blister output in Peru has been running since January 1 at 15 per cent below the second-half rate in 1960; Inspiration Consolidated, which went to 90 per cent of capacity and Cerro Corporation, which cut output 10 per cent in Peru.

On an annual basis the cuts in production that have been announced thus far this year amount to about 140,000 tons, made up as follows:

Company	% Cutback	Tons per month Cutback
Anaconda	10%	4,500
Kennecott	13%	4,500
S. Peru Copper ...	15%	2,100
Inspiration	10%	400
Cerro	10%	200
Total		11,700

In the opinion of some factors in the industry, these cutbacks will go a long way to correct the oversupply situation. The above calculations do not include the cutbacks that were announced in 1960 by Phelps Dodge, Rhodesian Selection Trust, and Noranda, because even with the curtailment that these companies put into effect, world production at the start of 1961 was still running greatly in excess of actual consumption.

There are some in the industry who are of the opinion that production in Katanga, that accounts for about 8 per cent of the world's output and the output in Northern Rhodesia which provides about 16 per cent of the world's total, may be interfered with as a result of the political and social unrest in Africa. If that should materialize, there would be a further substantial reduction in the world supply situation.

World Output at Peak

The most recent copper statistics point up the need of curtailment. The world output of crude copper in 1960 broke all previous records and was 23 per cent higher than in the previous year. Production outside the U. S., also set an all-time high, being 17 per cent above 1959.

Chaos in Zinc Pricing

A week of chaos in the zinc market followed an announcement by St. Joseph Lead Company that it would sell to all its customers on the basis of the quoted E&MJ E. St. Louis price for Prime Western zinc less a discount of 0.50c per pound until other sellers stopped selling at prices below those published. The next pricing develpomnet was a reduction of 0.50c a pound by American Smelting and Refining Company, bringing Prime Western to 11.50c at E. St. Louis. Other sellers promptly matched the Asarco price and it was indicated that all were quoting a firm price without discounts. St. Joe then went to a firm price basis stating, "it is hoped that future sales practices in the industry will not necessitate a reconsideration of this decision."

Zinc Statistics Poor

The domestic zinc statistics for December made a far poorer showing than had been anticipated The shipments to consumers were the smallest in about 8½ years. Production was up and producers' stocks increased. The gain in stocks would have been appreciably larger had it not been for the heavy exports in December.

The shipments of all grades of zinc to domestic consumers in December were only 46,094 tons, a drop of 10,887 tons from the preceding month, and the smallest for any month since July 1952, according to figures compiled by the American Zinc Institute. For all of 1960 the shipments to domestic consumers were 743,018 tons as against 872,867 tons in 1959, a drop of 15 per cent.

The exports and drawback in December were 18,178 tons, a gain of 6,179 tons over November. The heavy exports are believed to be cheifly responsible for the recent weakness in prics on the London Metal Exchange. For all of 1960 the exports were 88,220 tons as compared with only 17,971 tons in 1959, a gain of 70,249 tons.

The combined shipments (to consumers and for export) in December were 64,272 tons as compared with 68,980 tons in November a drop of 4,708 tons. For all of 1960 the shipments came to 831,238 tons as against 893,838 tons in 1959, a drop of 62,600 tons, or about 7 per cent.

Production of all grades of slab zinc in December came to 72,933 tons, a gain of 12,092 tons over November. It was the highest output for any month since last July. For all of 1960 production was 867,629 tons as against 858,020 tons in 1959, a gain of 9,609 tons.

At the end of December the stocks of all grades of zinc in the hands of producers amounted to 190,810 tons, a gain of 8,661 tons over the November stocks. At the end of 1959 the stocks stood at 154,419 tons, so that the gain in 1960 was 36,391 tons, an increase of about 23 per cent. It is this gain in stocks that has had a weakening effect on the market.

Lead Market Steady

Contrary to the trend in other metals, lead had a steady tone during the month. Business was being placed at both the average and at the flat price of 11.00c New York.

Since the custom smelters are comfortab'y fixed as far as their intake is concerned, the current price is expected to hold for the balance of the month. What will happen subsequently will depend largely on how business shapes up.

Sentiment in the lead market was bolstered when it was learned that the leading producer in Canada plans to cut production by 20 per cent this year at the mine level from the 1960 output. The interesting aspect of actual cutback rather than withholding lead from the market as some other foreign producers have been doing. At the present time world output is running in excess of consumption and it is this excess that has had a depressing effect on the price of the metal.

U. S. Lead Import Quota Not Restrictive Enough

(Continued from Page 10)

showed a decline from the previous year—about in line with the average drop. While a decline in sporting and field shot accounted for some of this, the use of lead as shot in free cutting steel and malleable iron reflected the marked decline in steel industry activity.

New Applications

"All other" uses of lead, which cover a myriad of applications too numerous to discuss in detail, was off considerably from 1959, but buried in this category are some new applications which some day might well warrant a classification of their own, as TEL did years ago. For example, the lead-absestos anti-vibration pad is now becoming so popular that not only new buildings like the Union Carbide and the proposed PanAm building at Grand Central are using them, but the columns of steel supporting older buildings are being jacked up and pads inserted where underground transportation systems create a vibration problem. Similarly, heavy machinery such as punch presses, are being insulated by lead asbestos mattresses from the rest of the building. The potential use of lead in this application is enormous, as is sound attenuation possibilities. Due to its density and limpness—prime requisites for deadening sound, lead is emerging as the most efficient sound attenuating material, in one form or another. Despite its weight, lead as a powder dispersed in plastic sheeting was first used in jet planes a year ago to deaden the noises of the jets within the cabins of passenger planes. From this has sprung many other possibilities—wall partitions, shields for noisy machines, etc. Another "sleeper," the full market possibilties of which are yet to be evaluated, is the well-known effectiveness of lead for radiation shielding. In the form of sheet, blocks, impregnated plastics or bonded to plywood or steel, more and more of the metal is going into this field. As the number of mobile reactors increase and the use of radioactive isotopes expands, the tonnage of lead will grow proportiontely.

On the production side of the "balance sheet" (see Table II), primary smelters and refiners turned out slightly more lead than in 1959 but well below their normal output. It may be recalled that smelter production was adversely affected by strikes at A. S. & R. plants and Anaconda's Toole smelter in 1959. This year the Bunker Hill strike, of much longer duration but affecting less of the output, was responsible for the low production. It is expected that the settlement of the Bunker Hill strike will bring back production to the rate which existed in early 1960 and this is reflected in our estimate for 1961. Secondary production maintained its usual relation of about 42 to 43% of total consumption and should continue to do likewise in the coming year. Metal imports course are fixed by quota and there is no reason to expect that they will not be fully met due to the more attractive price which usually prevails in the domestic market.

If these estimates of the 1961 picture are anywhere near accurate, it would appear that we will have a surplus of close to 50,000 tons of lead during the year. Under the circumstances, it is difficult to see the possibilities of any increase in the present price level of 11c per lb. unless consumption improves markedly above the 4% indicated, or the previously mentioned actions through Governmental agencies were to materialize.

Brtiish Metal Markets

(Contniued from Page 12)

Standard Lead Contract on the London Metal Exchange on January 3rd was accomplished very smoothly, and dealings in this metal are now on the basis of daily settlements for cash up to three calendar months forward for metal in warehouse.

Setback in Zinc

During December zinc prices on the London market declined much more rapidly than had been generally anticipated in view of the continued good overall level of consumption outside the United States, and the downward trend of producers stocks in America and OEEC countries recently. The setback which brought prices down from about £86 to £76 10s. (the lowest level for some 18 months) was almost entirely due to the substantial quantities of American zinc offered on the London market. At the beginning of 1961, with the changeover to the new Metal Exchange contract for metal in warehouse on the basis of the daily settlements, prices were marked up to some extent, but with the possibility of continued offerings from America for the time being (bearing in mind the reactivation of productive capacity there which has been idle for some months owing to strikes) it is difficult to be very bullish about the immediate outlook. In the U. K. consumption is probably down a little from its best levels this year, and it is open to doubt whether the total offtake for 1960 will quite equal that of 1959, which was of course a good year.

On the Continent, however, consumption is believed to have shown an improvement, and Japanese requirements, particularly of concentrates, remain high. Murmurs have been heard that the International Study Group may find it necessary to consider reductions in supplies of zinc when it meets in March, but it is too soon to get any very definite ideas on this point. A willingness on the part of producers to tighten the zinc supply situation might be encouraged by a weakness in lead prices coincidentally with a setback in zinc.

At the moment several of the distillation plants in Belgium are idle as a result of the serious strikes there, and should this situation persist any considerable length of time it would of course help to strengthen the statistical position outside America.

United States Duties on Principal Ore and Metal Imports

(Including Revisions in Effect June 30, 1957, Under Geneva Agreements)

(Quantities Are in Pounds Unless Otherwise Stated; n.s.p.f. Stands for "Not Specially Provided For.")

COPPER

NOTE — The excise tax of 4c a pound on copper (which was reduced to 2c a pound by the Geneva Trade Agreement) was suspended in April, 1947, until March 31, 1949, and on expiration it was further suspended until June 30, 1950. The tax was reimposed on July 1, 1950. It was suspended again on May 22, 1951, retroactive to April 1, 1951, and until February 15, 1953, and again until June 30, 1954. Suspension further extended to June 30, 1955, and again until June 30, 1958. The tax was restored July 1, 1958. The 1956 Geneva Agreement provided for 5% reductions effective on June 30 of 1956, 1957 and 1958, provided the prices were above 24c; if the price is below 24c the 2c tax will prevail.

Copper ore and concentrates, usable as flux, etc., having a copper content of not more than 15% and in an aggregate amount not to exceed in any one year 15,000 tons of copper content.....free

Copper ore and concentrates, product of Cuba, copper content .....free

Copper ore and concentrates, product of Philippines, copper content .....0.17c lb.

Copper ore and concentrates, copper content ..1.70c lb.

Regulus, black, or coarse copper, and cement copper, copper content .....1.70c lb.

Unrefined black, blister, and converter copper in pigs or converter bars, copper content .....1.70c lb.

Refined copper in ingots, plates or bars, copper content .....1.70c lb.

Copper rolls, rods or sheets .....1¼c lb. (plus 1.70c lb. ††)

Copper seamless tubes and tubing .....3½c lb (plus 1.70c lb. ††)

Copper plain wire .....12½% (plus 1.70c lb. ††)

Copper brazed tubes† .....4.50c lb. (plus 1.70c lb. ††)

Old and scrap copper, fit only for remanufacture: and scale and clippings, copper content ....1.70c lb.

†† Copper content.

BRASS

Brass rods, sheets, plates, bars, strips, Muntz or yellow metal sheets, sheathing, bolts, piston rods, shafting and bronze rods, tubes and sheets .....2c lb.

Brass tubes and tubing, seamless .....2c lb.

Brass tubes, brazed, angles and channels .....6c lb.

Brass and bronze wire 12½%

LEAD

NOTE — Import duties on lead-bearing ores, flue dust, and mattes of all kinds, lead bullion or base bullion, lead in pigs and bars, lead dross, reclaimed lead and antimonial lead were suspended February 12, 1952, and reimposed on June 26, 1952. Lead scrap duty was reimposed July 1, 1952.

Lead-bearing ores and mattes, n. s. p. f., lead content .....¾c lb.

Bullion or base bullion, lead content .....1 1/16c lb.

Pigs and bars, lead content .....1 1/16c lb.

Reclaimed, scrap, dross, lead content .....1 1/16c lb.

Babbitt metal and solder, lead content .....1 1/16c lb.

Pipe, sheets, shot, glaziers' lead, and wire...1 5/16c lb.

Type metal and antimonial lead, lead content .....1 1/16c lb.

White lead .....1.05c lb.

Litharge .....1¼c lb.

Red lead .....15/16c lb.

Orange mineral .....1c lb.

ZINC

NOTE — Import duties on zinc-bearing ores, and on zinc in blocks, pigs and slabs were suspended February 12, 1952, and reimposed on July 24, 1952. Tax on old zinc and dross and skimmings reimposed July 1, 1953.

Zinc-bearing ores, except pyrites containing not more than 3% zinc, zinc content .....6/10c lb.

Zinc contained in zinc-bearing ores, n. e. s., not recoverable, zinc content .....6/10c lb.

Zinc, old and worn out, fit only for remanufacture .....¾c lb.

Dross and skimmings .....¾c lb.

Zinc in blocks, pigs or slabs .....7/10c lb.

Zinc in sheets .....1c lb.

Zinc sheets, plated with nickel or other base metal, or solutions .....1⅛c lb.

Zinc dust .....7/10c lb.

Zinc die-casting alloys 12½%

Zinc oxide and leaded zinc oxides containing not more than 25% lead, dry .....3/5c lb. ground in or mixed with oil or water .....1c lb.

MISCELLANEOUS METALS AND ORES

Aluminum, metal and alloys, crude, except **alloys elsewhere provided for† .....1.25c lb.**

Aluminum scrap .....free

Aluminum plates, sheets, bars, rods, circles, **squares, etc.† .....2.50c lb.**

Antimony ore, antimony content .....free

Antimony metal and regulus .....2c lb

Antimony needle or liquidated .....¼c lb

Antimony oxide .....1c lb

Antimony sulphides .....½c lb. & 12½%

Arsenic, metallic† .....2.50c lb.

Arsenious acid or white arsenic .....free

Bauxite, crude* .....free

Bauxite, refined** .....¼c lb

Bismuth 1⅞%

Bismuth salts and compounds 35%

Beryllium metal† 21%

Beryllium ore .....free

Cadmium .....3¾c lb.

Cadmium flue dust, cadmium content .....free

Chrome ore or chromite .....free

Chrome or chromium metal† 10½%

Cobalt metal .....free

Cobalt ore and concentrates, cobalt content .....free

Magnesium, metallic† 50%

Magnesium powder, sheets, wire† .....17c lb. & 8½%

Magnesium alloys .....20c lb. & 10%

Magnesium scrap .....free

Manganese ores, containing over 10% manganese, manganese content .....¼c lb., except Cuba, free

Molybdenum ore or concentrates, molybdenum **content† .....30c lb.**

Nickel ore, matte and oxide .....free

Nickel and alloys, nickel chief value, n. s. p. f., in pigs, ingots, shot, cubes, grains, cathodes, or similar forms .....1¼c lb.

Nickel, bars, rods, plates, sheets, castings, strips, wire or electrodes 12½%

Nickel scrap .....free

Nickel tubes, tubing .....6¼% (if cold rolled, drawn or worked — 2½% extra)

Platinum, grain, nuggets, sponge and scrap, oz. troy..free

Platinum in ingots, bars, sheets, or plates, not less than ⅛ in. thick, oz. troy .....free

Platinum, ores, platinum content, oz. troy .....free

Quicksilver or mercury .....25c lb.

Selenium and salts .....free

Tantalum 12½%

Tin ore, cassiterite, and black oxide of tin, tin content .....free

Tin in bars, blocks, pigs, grain, granulated, and scrap, and alloys, chief value tin, n. s. p. f. .....free

Tungsten ore or concentrates, tungsten content...50c lb.

*Crude bauxite import duty suspended through July 15, 1960. **Under Public Law 25 alumina imported for use in aluminum production is free for entries from July 17, 1956 through July 15, 1960. †Tariff reduced 5% on June 30, 1958, under Geneva Agreement which expires on June 30, 1959.

Daily Metal Quotations for January, 1961

The following quotations are taken from the Daily Metal Reporter*
(In Cents Per Pound)

DECEMBER	Copper					Tin — Straits New York		Lead		Zinc					Aluminum†	Antimony	Silver
	Producers' Price Delivered	Custom Smelters' Price, Del.	Electro f. o. b. Refinery	Lake Del.	Aver. Prompt Electrolytic Export Price f.a.s. N. Y.	Spot	Prompt	New York	Outside St. Louis	Prime West. f. o. b. E. St. Louis	Prime West. Del. N. Y.	Brass Spec. f. o. b. E. St. Louis	High Grade Delivered	Spec. High Grade Delivered	50-Lb. Ingot 99½% Min. f. o. b.	Domestic Spot 99.5% f.o.b. Laredo	(Cents Per Ounce) New York
1	30.00	30.00	29.60	30.00	28.25	102.50	102.00	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
2	30.00	30.00	29.60	30.00	28.625	102.50	102.00	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
5	30.00	30.00	29.60	30.00	28.625	102.50	102.00	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
6	30.00	30.00	29.60	30.00	28.625	102.50	102.00	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
7	30.00	30.00	29.60	30.00	28.25	102.375	101.875	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
8	30.00	30.00	29.60	30.00	28.25	102.125	101.75	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
9	30.00	30.00	29.60	30.00	28.25	102.375	101.875	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
12	30.00	30.00	29.60	30.00	28.25	101.875	101.375	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
13	30.00	30.00	29.60	30.00	28.25	101.875	101.375	11.00	10.80	12.50	13.00	12.75	13.85	14.00	26.00	29.00	91.375
14	30.00	30.00	29.60	30.00	28.25	101.875	101.25	11.00	10.80	12.50	13.00	12.75	13.85	14.00	26.00	29.00	91.375
15	30.00	30.00	29.60	30.00	28.125	101.625	101.125	11.00	10.80	12.50	13.00	12.75	13.85	14.00	26.00	29.00	91.375
16	30.00	30.00	29.60	30.00	28.00	101.50	101.00	11.00	10.80	12.50	13.00	12.75	13.85	14.00	26.00	29.00	91.375
19	30.00	30.00	29.60	30.00	28.00	101.375	100.875	11.00	10.80	12.00	12.50	12.25	13.35	13.50	26.00	29.00	91.375
20	30.00	30.00	29.60	30.00	28.00	101.375	100.875	11.00	10.80	12.00	12.50	12.25	13.35	13.50	26.00	29.00	91.375
21	30.00	30.00	29.60	30.00	28.00	101.25	100.625	11.00	10.80	12.00	12.50	12.25	13.35	13.50	26.00	29.00	91.375
22	30.00	30.00	29.60	30.00	28.00	101.25	100.625	11.00	10.80	12.00	12.50	12.25	13.35	13.50	26.00	29.00	91.375
23	30.00	30.00	29.60	30.00	28.00	101.25	100.50	11.00	10.80	12.00	12.50	12.25	13.35	13.50	26.00	29.00	91.375
27	30.00	30.00	29.60	30.00	28.00	101.00	100.50	11.00	10.80	12.00	12.50	12.25	13.35	13.50	26.00	29.00	91.375
28	30.00	30.00	29.60	30.00	28.00	100.875	100.375	11.00	10.80	12.00	12.50	12.25	13.35	13.50	26.00	29.00	91.375
29	30.00	30.00	29.60	30.00	28.00	100.75	100.25	11.00	10.80	12.00	12.50	12.25	13.35	13.50	26.00	29.00	91.375
30	30.00	30.00	29.60	30.00	28.00	100.75	100.25	11.00	10.80	12.00	12.50	12.25	13.35	13.50	26.00	29.00	91.375
AV.	**30.00**	**30.00**	**29.60**	**30.00**	**28.179**	**101.661**	**101.142**	**11.38**	**11.18**	**12.475**	**12.976**	**12.726**	**13.825**	**13.976**	**26.00**	**29.00**	**91.375**
HI.	**30.00**	**30.00**	**29.60**	**30.00**	**28.75**	**100.75**	**102.00**	**12.00**	**11.80**	**13.00**	**13.50**	**13.25**	**14.35**	**14.50**	**26.00**	**29.00**	**91.375**
LO.	**30.00**	**30.00**	**29.60**	**30.00**	**28.00**	**100.75**	**100.25**	**11.00**	**10.80**	**12.00**	**12.50**	**12.25**	**13.35**	**13.50**	**26.00**	**29.00**	**91.375**

* When split quotations prevail the daily average price is listed. The highs and lows for the month take into consideration the levels reached at both sides of such ranges.
† Price prior to August 1, 1960, was 28.10c, based on 30-lb ingot. 99½% plus.

Copper Statistics Reported by Copper Institute

Combined Totals in U. S. A. and Outside U. S. A.

(In tons of 2,000 pounds)

	Crude Production		Refined	Deliveries to	Refined Stock	Stock Increases or Decreases		
	Primary	Secondary	Production	Customers	End of Period	Blister	Refined	Total
1957								
Total	**2,897,719**	**123,270**	**3,035,588**	**2,853,307**	**458,340**	**—14,599**	**+103,920**	**+89,321**
1958								
Total	2,713,412	138,696	2,811,108	2,918,404	262,544	+41,000	—195,796	—154,796
1959								
Total	2,860,454	134,583	2,926,657	2,973,026	293,006	+68,380	+28,774	+97,154
1960**								
March	307,064	12,198	303,503	307,572	300,790	+15,759	— 1,561	+14,198
April	302,268	17,477	326,403	319,037	309,357	— 6,658	+ 8,567	+ 1,909
May	301,070	17,248	323,167	321,783	312,666	— 4,849	+ 3,309	— 1,540
June	302,703	16,786	329,518	305,964	338,202	—10,029	+25,536	+15,507
July	294,052	13,584	299,427	268,191	371,306	+ 8,209	+33,104	+41,313
August	295,318	16,257	330,365	319,337	383,305	—18,790	+11,999	— 6,791
September	306,264	12,718	322,575	328,660	378,845	— 3,223	— 4,460	— 7,683
October	286,470	13,113	308,398	280,522	408,152	— 9,199	+29,307	+20,108
November	293,623	12,121	307,697	286,020	428,192	— 1,224	+20,040	+18,816
December	304,602	11,577	318,740	316,974	427,782	— 2,561	— 410	— 2,971
Total	3,525,418	172,352	3,697,359	3,606,766	427,782	+ 411	+120,318	+120,729

In U. S. A.

1957								
Total	**1,116,380**	**112,060**	**1,616,964**	**1,277,946**	**181,024**	.....	**+60,379**	.....
1958								
Total	1,008,170	131,294	1,446,540	1,179,416	80,722	.....	—100,302	.....
1959								
Total	805,875	121,462	1,221,612	1,312,328	64,763	.....	—17,647	.....
1960								
March	107,514	9,166	131,308	126,776	61,598	.....	— 2,409	.....
April	104,895	14,765	153,053	129,663	63,373	.....	+ 1,775	.....
May	104,272	13,857	147,050	108,266	65,328	.....	+ 1,995	.....
June	95,522	13,585	161,073	106,207	87,667	.....	+22,339	.....
July	91,238	10,822	132,697	83,788	93,102	.....	+ 5,435	.....
August	85,579	13,368	157,382	105,417	97,379	.....	+ 4,277	.....
September	96,503	10,150	147,934	120,585	84,316	.....	—13,063	.....
October	102,034	10,631	151,497	93,451	113,417	.....	+29,101	.....
November	100,255	9,932	149,277	99,749	130,254	.....	+16,837	.....
December	100,456	9,642	152,211	91,163	139,272	.....	+ 9,018	.....
Total	1,138,265	141,300	1,675,390	1,279,745	139,272	.....	+74,509	.....

Outside U. S. A.*

1957								
Total	**1,781,339**	**11,210**	**1,418,624**	**1,575,361**	**277,316**	.....	**+43,541**	.....
1958								
Total	1,705,242	7,402	1,364,568	1,738,988	181,822	.....	—95,494	.....
1959								
Total	2,054,579	13,121	1,705,045	1,660,698	228,243	.....	+46,421	.....
1960**								
March	199,550	3,023	172,145	180,796	239,192	.....	+ 848	.....
April	197,373	2,712	173,350	189,374	245,984	.....	+ 6792	.....
May	195,278	3,391	174,298	210,868	247,338	.....	+ 1,354	.....
June	207,181	3,201	168,445	199,757	250,535	.....	+ 3,197	.....
July	202,814	2,762	166,730	184,403	278,204	.....	+27,669	.....
August	209,736	2,421	172,983	213,920	285,926	.....	+ 7,722	.....
September	210,131	2,568	174,641	208,075	294,529	.....	+ 8,603	.....
October	184,436	2,482	156,901	187,081	294,735	.....	+ 206	.....
November	193,368	2,189	158,420	186,271	297,938	.....	+ 3,203	.....
December	204,146	1,935	166,529	225,811	288,510	.....	— 9,428	.....
Total	2,387,153	31,052	2,021,969	2,327,021	288,510	.....	+45,809	.....

* Excludes production of Russia, Japan, Yugoslavia, Norway, Sweden, Finland, the Messina Mine in Transvaal and output of several other small producing countries from which reports are not available. Represents approximately 90 per cent of Free World.

** Starting with January, 1960, figures include production from Australia and additional production from Europe.

Electrolytic Copper

Producers' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	36.00	25.69	29.00	33.00
Feb.	33.318	25.00	29.972	33.00
Mar.	32.00	25.00	31.14	33.00
Apr.	32.00	25.00	31.50	33.00
May	32.00	25.00	31.50	33.00
June	30.955	25.36	31.50	33.00
July	29.25	26.125	30.587	33.00
Aug.	28.639	26.50	30.00	33.00
Sept.	27.031	26.50	30.571	33.00
Oct.	27.00	27.548	30.75	31.05
Nov.	27.00	29.00	32.375	30.00
Dec.	27.00	29.00	33.00	30.00
Avre.	30.162	26.251	31.222	32.338

Electrolytic Copper

Custom Smelters' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	34.87	24.577	29.429	35.00
Feb.	32.273	23.557	30.361	35.00
Mar.	30.952	23.326	33.31	33.609
Apr.	31.24	23.66	32.84	33.00
May	30.163	23.865	32.00	33.00
June	29.60	25.52	31.477	33.00
July	28.39	29.231	29.52	33.00
Aug.	27.862	26.52	30.056	33.00
Sept.	25.948	26.355	33.00	33.00
Oct.	25.722	28.577	33.00	30.35
Nov.	25.435	29.829	Nom.	30.00
Dec.	25.26	28.846	35.00	30.00
Aver.	28.93	25.905	31.808	32.663

Lake Copper

Producers' Price Delivered
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	36.00	25.69	29.00	33.00
Feb.	33.182	25.00	30.00	33.00
Mar.	32.00	25.00	31.14	33.00
Apr.	32.00	25.00	31.50	33.00
May	32.00	25.00	31.50	33.00
June	30.955	25.00	31.50	33.00
July	29.25	25.75	30.587	33.00
Aug.	28.611	26.50	30.00	33.00
Sept.	27.031	26.50	30.571	33.00
Oct.	27.00	27.577	31.50	31.05
Nov.	27.00	29.00	32.833	30.00
Dec.	27.00	29.00	33.00	30.00
Aver.	30.182	26.251	31.222	32.338

Fabricators' Copper Statistics

(In tons of 2,000 pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consmd. by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1954						
Total	360,526	58,125	304,619	136,581	1,231,840	— 22,549
1955						
Total	.....	.....	.....	.....	1,418,241	.....
1956						
Total	.....	.....	.....	.....	1,416,378	.....
1957						
Total	.....	.....	.....	.....	1,279,086	.....
1958						
Jan.	445,514	57,917	348,426	123,756	94,642	+ 31,249
Feb.	452,673	52,342	351,035	128,330	86,625	+ 25,650
Mar.	448,125	71,693	346,875	141,387	83,694	+ 31,556
Apr.	450,442	76,602	347,607	145,623	79,613	+ 33,814
May	441,001	78,194	346,404	138,190	88,447	+ 34,601
June	433,526	72,383	330,301	145,162	109,011	+ 30,448
July	431,796	77,362	326,263	153,529	79,353	+ 29,366
Aug.	421,931	78,194	323,667	150,436	96,717	+ 26,022
Sept.	416,887	71,025	319,281	145,390	105,474	+ 28,941
Oct.	399,113	91,019	315,929	156,692	138,017	+ 17,511
Nov.	419,914	88,580	328,238	157,799	110,487	+ 22,457
Dec.	447,123	90,401	326,438	177,869	92,573	+ 35,217
Total	....	....	....	....	1,165,364	....
1959						
Jan.	457,387	101,182	337,761	172,698	108,556	+ 44,070
Feb.	459,046	123,321	390,522	183,113	116,565	+ 58,732
Mar.	449,441	130,785	334,904	211,547	133,259	+ 33,775
Apr.	463,582	125,250	337,282	204,618	120,680	+ 46,932
May	474,657	133,694	338,835	210,424	124,060	+ 59,092
June	492,072	111,229	343,585	191,875	133,702	+ 67,841
July	518,699	110,367	357,474	193,338	81,500	+ 68,254
Aug.	487,259	97,786	359,049	191,476	121,563	+ 34,520
Sept.	462,880	111,675	360,760	206,254	116,880	+ 7,541
Oct.	431,612	119,806	347,136	211,359	100,302	— 7,077
Nov.	412,401	127,162	338,856	224,442	102,837	— 23,735
Dec.	414,757	130,324	340,349	202,775	88,706	+ 1,957
Total	....	....	....	....	1,347,610	....
1960						
Jan.	414,652	141,860	340,233	193,300	102,295	+ 22,979
Feb.	423,131	132,696	343,196	165,991	103,072	+ 46,640
Mar.	441,026	119,963	348,081	134,461	108,881	+ 78,447
Apr.	457,070	99,814	357,711	111,062	113,619	+ 88,111
May	457,644	85,491	360,770	117,150	107,838	+ 65,215
June	451,982	90,527	364,301	132,070	112,223	+ 46,138
July	459,620	87,798	372,186	126,281	75,650	+ 48,951
Aug.	457,421	81,338	373,186	122,415	107,616	+ 43,026
Sept.	465,178	77,787	378,677	127,346	112,828	+ 37,032
Oct.	453,406	75,052	370,949	116,241	105,223	+ 39,268
Nov.	446,098	68,165	369,972	116,523	107,057	+ 27,768

Scrap Copper Receipts by Custom Smelters and Refineries in United States*

(In Short Tons)

	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Jan.	6,640	4,528	6,486	9,859	11,047	14,322	17,506	16,024	14,511	15,165
Feb.	5,153	3,633	10,337	8,490	15,198	14,497	11,145	9,518	14,712	14,614
Mar. ...	7,912	5,243	19,991	9,738	12,198	15,921	13,934	11,783	19,522	11,675
Apr.	8,553	6,214	16,583	9,004	13,162	17,233	14,288	15,279	17,525	17,543
May	8,458	8,033	10,857	8,687	15,133	20,805	12,397	13,989	13,960	16,497
June ...	8,628	4,425	10,945	13,309	14,765	14,758	11,949	13,945	15,065	15,769
July	6,642	5,188	9,063	10,260	9,988	12,632	8,926	12,185	11,144	12,609
Aug.	6,113	5,003	7,137	10,100	12,197	12,510	11,645	11,896	7,468	16,400
Sept. ...	3,561	4,667	9,042	10,641	15,037	9,518	9,756	9,268	10,070	12,559
Oct.	3,336	4,602	10,065	11,662	12,897	15,570	13,151	23,088	12,860	13,168
Nov.	3,179	4,724	7,815	10,879	9,865	11,369	11,146	16,425	11,773	12,309
Dec.	4,538	6,208	11,476	14,876	13,180	14,613	11,237	10,796	10,894	12,303
Total ...	71,812	62,470	129,798	127,449	154,714	173,748	147,080	164,196	159,507	170,654

* As compiled by Copper Institute.

Brass and Bronze Ingot Monthly Shipments

(NET TONS)

The following figures showing the combined shipments of ingot brass and bronze are compiled by the Ingot Brass and Bronze Industry and represent in excess of 95 per cent of the deliveries of the entire industry.

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Jan.	18,874	28,416	28,315	23,423	20,661	25,201	27,736	25,681	20,468	22,046	22,695
Feb.	18,487	27,168	24,211	25,429	19,920	25,349	24,949	20,769	17,413	23,746	23,129
Mar.	22,494	31,997	23,890	28,256	23,653	29,713	28,310	21,948	18,825	26,109	23,232
Apr.	22,118	30,473	22,547	25,044	24,746	27,641	25,808	23,507	18,009	26,115	20,413
May	23,643	33,267	21,740	21,660	22,269	23,708	23,437	22,037	17,191	23,967	19,885
June	25,093	33,817	21,274	20,818	22,348	23,141	18,842	18,888	17,962	22,922	19,625
July	21,609	32,016	18,947	19,321	17,074	18,513	17,364	16,695	16,658	20,346	14,887
Aug.	29,689	25,285	21,807	20,156	21,684	27,013	23,812	19,654	17,882	21,741	20,216
Sept.	28,811	22,285	22,770	21,463	22,464	26,349	20,929	19,670	20,540	22,685	18,259
Oct.	32,240	23,124	25,811	22,280	24,080	25,228	23,045	22,800	23,225	23,067	18,948
Nov.	31,748	23,544	23,441	21,806	23,061	25,102	21,818	19,767	20,758	22,283	18,518
Dec.	28,575	20,987	22,983	20,541	21,274	21,448	18,046	16,875	18,676	19,535	15,925
Total	303,563	332,378	277,736	271,251	263,233	298,406	274,096	248,297	227,607	274,562	235,732
Aver.	25,297	27,615	23,145	22,694	21,936	24,867	22,841	20,681	18,133	22,864	19,644

Mine Production of Copper in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern	Missouri	Western	Total
1957				
Ttl.	79,369	1,800	995,753	1,076,922
1958				
Ttl.	76,849	1,250	902,021	980,304
1959				
May	7,007	110	94,493	101,610
June	7,245	124	87,035	94,404
July	6,763	111	80,058	86,932
Aug.	6,813	116	47,910	54,839
Sept.	6,655	123	20,342	27,120
Oct.	7,092	152	22,669	29,913
Nov.	3,226	140	22,529	25,895
Dec.	3,228	128	22,504	25,860
Ttl.	74,255	1,550	754,630	830,435
1960				
Jan.	3,904	107	43,845	47,856
Feb.	3,819	114	71,257	75,190
Mar.	7,229	96	88,931	96,256
Apr.	7,149	97	90,288	97,534
May	7,530	77	91,152	98,759
June	7,296	97	87,839	95,232
July	6,096	76	80,119	86,291
Aug.	7,038	89	83,752	90,879
Sept.	6,599	95	90,773	97,467
Oct.	6,827	47	91,175	98,049

Average Custom Smelters' Scrap Buying Prices

(Cents per pound for carload lots del. consumers' works)

	No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	Refinery Brass*
1959				
Oct.	27.929	25.405	23.155	24.905
Nov.	30.00	26.208	23.958	24.528
Dec.	29.50	25.993	23.743	24.239
Av.	27.321	25.377	23.102	24.774
1960				
Jan.	30.025	26.30	24.05	24.55
Feb.	29.868	25.75	23.50	24.00
Mar.	27.207	24.038	21.788	22.071
Apr.	27.063	24.256	22.006	22.256
May	26.548	24.369	22.119	22.368
June	26.557	24.455	22.205	22.455
July	27.575	25.075	22.825	23.075
Aug.	27.962	25.81	23.56	23.81
Sept.	26.888	24.888	22.638	22.888
Oct.	24.90	22.90	20.65	20.90
Nov.	25.237	23.237	20.986	21.236
Dec.	25.595	23.595	21.345	21.595
Aver.	27.118	24.442	22.191	22.486

*Of dry content for material having a dry copper content in excess of 60%.

Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)

(Cents per pound del. refinery for 60,000 lbs. of each grade)

	No. 1 Copper Scrap	No. 2 Copper Scrap	No. 1 Composition	Heavy Yellow Brass
1959				
Oct.	27.595	25.405	22.19	16.048
Nov.	29.00	26.208	22.75	16.326
Dec.	28.50	25.993	22.50	16.00
Av.	27.120	25.377	21.567	15.52
1960				
Jan.	29.025	26.30	22.74	16.39
Feb.	28.408	25.75	22.00	16.00
Mar.	27.321	24.038	20.429	15.174
Apr.	27.063	24.256	20.613	15.15
May	26.548	24.369	20.613	15.083
June	26.715	24.455	20.25	15.193
July	27.375	25.075	21.075	15.875
Aug.	27.712	25.81	21.679	15.951
Sept.	26.638	24.888	21.762	16.363
Oct.	24.65	22.90	20.10	15.15
Nov.	24.987	23.237	19.153	15.132
Dec.	25.345	23.595	21.493	15.964
Aver.	26.811	24.442	20.992	15.619

Lead Statistics Reported by American Bureau of Metal Statistics

Lead Refineries in U. S. A. and Outside U. S. A.

(Recoverable Lead Content in Tons of 2,000 Pounds)

Combined U. S. A. and Outside U. S. A.

	REFINED PRODUCTION			DELIVERIES			STOCKS		
		Antimonial Lead			Antimonial Lead			Antimonial Lead	
1958	Pig	Content	Total	Pig	Content	Total	Pig	Content	Total
Total ..	1,485,282	106,383	1,591,665	1,307,390	102,697	1,410,087	.....	.....	.....
1959									
Total ..	1,406,485	105,943	1,512,418	1,422,985	106,666	1,529,651	.....	.....	.....
1960									
Apr. ..	137,979	7,574	145,553	107,128	7,691	114,819	324,400	19,765	344,165
May ..	130,426	11,126	141,552	125,126	8,556	133,682	329,700	22,335	352,035
June ..	117,093	8,181	125,274	113,103	9,361	122,464	333,690	21,155	354,845
July ..	117,065	9,290	126,355	105,097	7,187	112,284	345,658	23,258	368,916
Aug. ..	112,994	9,157	122,151	127,102	9,474	136,576	331,550	22,941	354,491
Sept. ..	117,297	6,073	123,370	110,602	7,497	118,099	338,245	21,517	359,762
Oct. ...	129,101	9,096	138,197	122,559	9,336	131,895	344,813	21,277	366,090
Nov. ..	128,835	11,343	140,178	134,435	8,555	142,990	339,213	24,065	363,278
U. S. A.									
1958									
Total ..	**473,208**	**46,985**	**520,193**	**589,528**	**49,893**	**639,421**	.....	.....	.....
1959									
Total ..	343,726	34,628	378,354	596,214	42,312	638,526	.....	.....	.....
1960									
Apr. ..	37,465	2,186	39,651	36,572	2,267	38,839	164,875	12,514	177,389
May ..	33,474	3,296	36,770	47,433	2,664	50,097	170,208	13,426	183,634
June ..	31,188	2,094	33,282	46,753	2,921	49,674	169,879	12,837	182,716
July ..	26,906	2,227	29,133	34,595	2,003	36,598	171,825	13,328	185,153
Aug. ..	29,936	2,532	32,468	47,569	2,871	50,440	171,356	13,221	184,577
Sept. ..	27,917	1,600	29,517	39,570	3,365	42,935	171,520	11,533	183,053
Oct. ...	30,131	3,055	33,186	38,452	3,538	41,990	173,470	11,165	184,635
Nov. ..	34,997	3,170	38,167	41,011	2,505	43,516	185,756	12,006	197,762
Outside U. S. A.									
1958									
Total ..	**1,012,074**	**59,398**	**1,071,472**	**717,862**	**52,804**	**710,666**	.....	.....	.....
1959									
Total ..	1,062,759	71,315	1,134,074	826,771	64,453	891,125	.....	....	.....
1960									
Apr. ..	100,514	5,388	105,902	70,556	5,424	75,980	159,525	7,251	166,776
May ..	96,952	7,830	104,782	77,693	5,892	83,585	159,492	8,909	168,401
June ..	85,905	6,087	91,992	66,350	6,440	72,790	163,811	8,318	172,129
July ..	90,159	7,063	97,222	70,502	5,184	75,686	173,833	9,930	183,763
Aug. ..	83,058	6,625	89,683	79,533	6,603	86,136	160,194	9,720	169,914
Sept. ..	89,380	4,473	93,853	71,032	4,132	75,164	166,725	9,984	176,709
Oct. ...	98,970	6,041	105,011	84,107	5,798	89,905	171,343	10,112	181,455
Nov. ..	93,838	8,173	102,011	93,424	6,050	99,474	153,457	12,059	165,516

* Stocks on Jan. 1, 1960 are not comparable to those reported for Dec. 31, 1959 due to changes in the basis by reporting areas.

Summary of Lead Statistics for United States

		Stocks (end of period)				Smelter Receipts			
		Base Bullion				Primary Origin			
Recoverable Lead Content In Tons of 2000 Pounds	Raw Material at Smelter	At Smelter & Transit	At Refinery and Process	Refined Pig and Antimonial	Total	U.S.A.	Outside U.S.A.	Scrap	Total
1958									
Total	....	....	....	.....	.....	297,687	191,415	29,080	518,182
1959									
Total	.....	....	.....	.....	.....	244,803	125,100	20,596	389,999
1960									
April	89,421	3,639	39,950	177,389	310,399	27,863	9,264	2,207	39,334
May	98,470	4,402	36,979	183,634	323,485	22,537	17,959	2,048	42,544
June	95,364	5,210	39,928	182,716	323,218	20,895	11,717	1,337	33,949
July	93,153	5,234	45,446	185,153	328,986	19,466	11,957	1,285	32,708
August	90,346	5,847	48,304	184,577	329,074	20,002	9,105	1,874	32,981
September ..	96,610	5,643	48,613	183,053	333,919	21,713	13,757	1,945	37,445
October	96,453	5,149	54,427	184,635	340,664	23,207	13,101	1,107	37,415
November ..	90,441	5,327	51,109	197,762	344,639	21,089	7,581	703	29,373

		Refined Productions			Deliveries to U. S. Fabricators including imports from sources reporting to ABMS		
1958	Smelter Production	Pig	Antimonial	Total	Pig	Antimonial	Total
Total	512,323	473,208	46,985	520,193	589,528	49,893	639,421
1959							
Total	381,656	343,726	34,628	378,354	596,214	42,312	638,526
1960							
April	42,436	37,465	2,186	39,651	36,572	2,267	38,839
May	33,106	33,474	3,296	36,770	47,433	2,264	50,097
June	36,525	31,188	2,094	33,282	46,753	2,921	49,674
July	34,457	26,906	2,227	29,133	34,595	2,003	36,598
August	35,271	29,936	2,532	32,468	47,569	2,871	50,440
September	30,801	27,917	1,600	29,517	39,570	3,365	42,935
October	37,149	30,131	3,055	33,186	38,452	3,538	41,990
November	34,988	34,997	3,170	38,167	41,011	2,505	43,516

United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	Stock At Beginning	Production Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1954	81,152	551,618	632,770	92,719	475,551
1955	28,855	547,153	639,872	31,089	531,339
1956	.....	613,293	644,382	.....	529,484
1957	.....	604,353	645,534	.....	463,060
1958	....	522,956	614,554	....	380,359
1959					
June	171,577	37,459	209,036	133,235	75,465
July	133,235	32,882	166,117	142,694	22,380
August	142,694	25,589	168,283	124,259	43,850
September	124,259	14,801	139,060	117,296	21,795
October	117,296	18,892	136,188	115,418	20,552
November	115,418	18,796	134,214	114,303	19,869
December	114,303	30,160	144,463	119,993	24,516
Total	....	380,674	579,182	....	450,983
1960					
January	119,993	40,043	160,036	117,589	42,083
February	117,589	36,435	154,024	116,269	37,599
March	116,269	37,192	153,461	109,148	44,076
April	109,148	40,177	149,325	118,329	30,686
May	118,329	36,509	154,838	123,148	31,690
June	123,148	33,448	156,596	129,859	26,725
July	129,859	29,270	159,129	135,858	23,169
August	135,858	32,623	168,481	138,365	30,001
September	138,365	29,638	168,003	138,584	29,406
October	138,584	33,336	171,920	141,338	30,152
November	141,338	38,387	179,725	153,895	25,207
December	153,895	29,799	183,694	160,149	23,088
Total	....	416,857	536,850	....	373,881

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

Industrial Classification of Domestic Lead Shipments

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Cable	Amm.	Foil	Batt'y	Brass Making	Sundries	Jobbers	Unclassified
1955								
Total	72,418	27,599	2,622	88,461	3,960	52,994	13,034	270,251
1956								
Total	80,360	24,501	1,435	70,614	3,158	56,851	13,213	274,716
1957								
Total	58,444	25,452	1,691	64,761	7,420	53,284	11,127	240,881
1958								
Aug.	3,481	2,415	70	4,992	400	6,399	100	16,397
Sept.	4,132	2,290	320	5,775	848	6,771	1,747	19,774
Oct.	3,243	2,450	...	4,548	285	6,210	1,641	28,270
Nov.	3,690	2,150	50	6,527	360	4,887	822	12,105
Dec.	2,267	2,100	50	6,216	215	2,578	652	10,774
Total	38,838	20,855	1,080	57,180	5,841	51,086	11,882	193,592
1959								
Jan.	2,284	2,100	100	5,594	161	3,545	727	18,524
Feb.	2,988	1,225	50	5,254	735	2,706	931	16,796
Mar.	3,156	1,850	105	5,905	378	6,006	2,185	21,395
April	3,686	2,150	35	7,410	691	5,356	1,966	31,355
May	4,054	2,900	35	6,870	475	7,990	2,843	40,040
June	5,272	3,210	70	12,515	180	8,009	3,663	42,546
July	850	295	70	2,570	315	3,166	997	14,117
Aug.	3,268	1,150	205	3,073	410	6,640	1,921	27,183
Sept.	1,003	....	35	3,401	255	2,296	1,484	13,321
Oct.	700	500	35	4,299	228	2,676	1,021	11,093
Nov.	2,630	200	70	3,714	205	2,566	797	9,687
Dec.	2,133	950	70	3,479	475	2,628	738	14,043
Total	32,024	16,530	880	64,084	4,508	53,584	19,273	260,100
1960								
Jan.	2,138	3,352	105	3,268	550	4,786	1,106	26,778
Feb.	2,665	2,350	50	4,930	295	3,715	574	23,020
Mar.	2,221	1,500	...	8,195	1,050	8,298	2,133	20,679
Apr.	2,005	2,707	83	2,891	380	5,180	916	16,519
May	2,327	1,000	35	4,516	115	4,526	927	18,244
June	2,665	1,500	70	5,043	230	714	690	15,813
July	1,690	1,280	70	3,745	88	2,120	28	14,148
August	2,796	1,692	35	5,873	220	4,603	50	14,732
Sept.	2,049	2,208	35	4,439	469	3,371	255	16,579
Oct.	3,453	1,996	...	4,936	146	3,064	530	16,027
Nov.	2,290	1,795	15	4,003	380	2,342	190	14,192
Dec.	1,944	1,688	15	4,456	101	1,809	330	12,745
Total	28,243	23,068	518	56,295	4,024	44,528	7,729	209,476

Lead Prices at New York

(Common Grade)
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	16.00	13.00	12.619	12.00
Feb.	16.00	13.00	11.583	12.00
Mar.	16.00	13.00	11.42	12.00
Apr.	16.00	12.00	11.20	12.00
May	15.385	11.712	11.905	12.00
June	14.32	11.24	12.00	12.00
July	14.00	11.00	12.00	12.00
Aug.	14.00	10.85	12.286	12.00
Sept.	14.00	10.89	13.00	12.00
Oct.	13.704	12.673	13.00	12.00
Nov.	13.50	13.00	13.00	12.00
Dec.	13.00	13.00	12.523	11.38
Aver.	**14.66**	**12.114**	**12.211**	**11.948**

Lead Sheet Prices

(To Jobbers, Full Sheets)
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	21.50	18.50	18.119	17.50
Feb.	21.50	18.50	17.083	17.50
Mar.	21.50	18.50	16.92	17.50
Apr.	21.50	17.50	16.70	17.50
May	20.885	17.212	17.405	17.50
June	19.82	16.74	17.50	17.50
July	19.82	16.50	17.50	17.50
Aug.	19.50	16.35	17.786	17.50
Sept.	19.50	16.39	18.50	17.50
Oct.	19.204	18.173	18.50	17.50
Nov.	19.00	18.50	18.50	17.50
Dec.	18.50	18.50	18.023	16.88

Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers:

(In thousands of units)

	1957	1958	1959	1960
Jan.	2,638	2,004	2,672	1,866
Feb.	1,961	1,803	1,791	1,641
Mar.	1,254	1,577	1,376	1,877
Apr.	1,178	1,242	1,437	1,545
May	1,605	1,454	1,593	1,650
June	1,878	1,773	2,118	2,072
July	2,469	2,101	2,556	2,131
Aug.	2,856	2,333	2,728	2,550
Sept.	2,688	2,704	2,889	2,708
Oct.	3,042	2,976	3,069	2,834
Nov.	2,359	2,262	2,799	2,632
Dec.	2,015	3,041	2,465	....
Total	**25,943**	**25,270**	**27,493**	....

Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	In ore and matte and in process at smelteries	—In base bullion (lead content)— At smelteries & refineries	In transit to refineries	In process at refineries	Refined pig lead	Anti-monial lead	Total Stocks
1958							
Sept. 1.	77,416	14,767	1,176	20,444	158,413	10,889	283,105
Oct. 1..	72,724	14,797	2,223	18,125	159,662	11,004	278,535
Nov. 1..	61,819	11,492	1,086	19,041	157,385	12,050	262,873
Dec. 1..	62,960	11,072	1,565	20,941	167,493	11,828	275,859
1959							
Jan. 1..	72,378	10,917	1,767	19,746	185,913	12,595	303,316
Feb. 1..	72,832	10,565	1,889	21,317	197,085	11,789	315,477
Mar. 1..	62,383	11,707	1,447	21,479	202,835	12,111	311,962
Apr. 1..	68,433	14,352	350	20,575	198,459	12,065	314,234
May 1..	64,538	12,373	624	20,507	184,468	13,355	295,865
June 1..	55,223	12,239	766	20,391	157,981	13,596	260,196
July 1..	58,451	13,270	943	19,468	120,914	12,321	225,367
Aug. 1..	53,115	18,379	158	18,021	129,551	13,143	232,367
Sept. 1.	50,007	17,389	....	15,638	116,344	7,915	207,293
Oct. 1..	61,910	17,925	....	14,932	109,527	7,769	212,063
Nov. 1..	69,429	14,800	...	14,919	107,849	7,569	214,566
Dec. 1..	70,837	12,919	...	15,708	106,678	7,625	213,767
1960							
Jan. 1..	73,381	16,955	3,085	16,914	108,002	11,991	230,328
Feb. 1..	78,315	17,139	1,425	19,003	105,292	12,297	233,471
Mar. 1..	89,656	14,899	1,643	19,360	103,615	12,654	241,827
Apr. 1..	96,716	17,043	867	20,603	96,469	12,679	244,377
May 1..	92,969	16,519	1,581	22,124	105,498	12,831	251,522
June 1..	102,454	12,444	889	24,237	109,270	13,878	263,172
July 1..	99,230	15,371	1,461	24,600	116,638	13,221	270,521
Aug. 1..	96,675	19,414	2,302	25,578	122,130	13,728	279,827
Sept. 1.	93,921	25,290	1,175	24,190	124,711	13,654	282,941
Oct. 1..	100,073	27,328	2,106	21,471	126,696	11,888	289,562
Nov. 1..	100,302	28,614	1,647	25,565	129,798	11,540	297,466
Dec. 1..	93,676	29,411	1,584	22,312	141,393	12,502	300,878

Receipts of Lead in Ore and Scrap

By U. S. Smelters (a)

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	——Receipts of lead in ore—— United States	Foreign	Total	Receipts of lead in scrap etc. (b)	Total receipts in ore, & scrap
1953 Total	351,183	155,788	506,971	42,994	549,965
1954 Total	336,291	158,081	494,372	49,864	544,236
1955 Total	341,595	172,966	514,561	42,996	557,557
1956 Total	368,499	192,318	560,817	55,925	616,792
1957 Total	356,409	206,901	563,310	42,537	605,847
1958					
September	20,654	14,576	35,230	1,765	36,995
October	18,678	9,093	27,771	3,577	31,348
November	24,024	14,541	38,565	3,933	42,498
December	24,366	18,804	43,170	3,982	47,152
Total	285,164	188,144	473,308	30,115	503,423
1959					
January	24,304	19,449	43,753	3,138	46,891
February	22,253	8,660	30,913	1,747	32,660
March	21,897	21,012	42,909	1,328	44,237
April	22,339	10,998	33,337	1,196	34,533
May	21,645	5,202	26,847	1,930	28,777
June	23,634	12,368	36,002	2,431	38,433
July	19,165	11,695	30,860	2,199	33,059
August	19,971	2,821	22,792	1,009	23,801
September	13,591	3,465	17,056	32	17,088
October	14,740	3,648	18,388	133	18,521
November	13,808	4,582	18,390	133	18,523
December	21,208	20,977	42,185	5,269	47,454
Total	238,555	124,877	363,432	20,545	383,977
1960					
January	20,531	26,307	46,838	2,041	48,879
February	23,700	15,541	39,241	2,439	41,680
March	28,824	16,742	45,566	2,404	47,970
April	26,574	9,243	35,817	2,212	38,029
May	21,674	16,679	38,353	2,812	41,165
June	20,248	11,694	31,942	2,580	34,522
July	18,831	11,252	30,083	2,237	32,320
August	21,515	8,952	30,467	2,324	32,791
September	24,896	12,192	37,088	2,140	39,228
October	24,101	12,857	36,958	1,487	38,445
November	20,236	7,490	27,726	900	28,626

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably underrun the actual production of pig lead. (b) Inclusive only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

N. Y. Lead Price Changes

(Effective Date)

1952		June 15	14.00
Apr. 29	18.00	Aug. 25	14.25
May 2	17.00	Sept. 7	14.50
May 12	15.00	Sept. 15	14.75
June 23	15.50	Oct. 4	14.875
June 24	16.00	Oct. 5	15.00
Oct. 7	15.00	1955	
Oct. 14	14.00	Sept. 23	15.00-15.50
Oct. 22	13.50	Sept. 26	15.50
Nov. 3	14.00	Dec. 29	16.00
Nov. 10	14.20	1956	
Nov. 11	14.50	Jan. 4	16.50
Nov. 20	14.25	Jan. 13	16.00
Nov. 24	14.00	1957	
Dec. 22	14.25	May 9	15.50
Dec. 29	14.50	May 16	15.00
Dec. 31	14.75	June 11	14.00
1953		Oct. 14	13.50
Jan. 7	14.50	Dec. 2	13.00
Jan. 12	14.00	1958	
Feb. 2	13.50	Apr. 1	12.00
Mar. 4	13.00	May 14	11.50
Mar. 10	13.50	June 3	11.00
Apr. 7	13.00	June 18	11.50
Apr. 16	12.50	July 1	11.00
Apr. 21	12.00	Aug. 13	10.75
Apr. 29	12.50	Sept. 17	11.00
May 18	12.75	Sept. 30	11.50
May 19	13.00	Oct. 2	12.00
May 26	13.15	Oct. 8	12.50
June 11	13.50	Oct. 14	13.00
July 20	13.75	1959	
July 23	14.00	Jan. 21	12.00
Sept. 16	13.50	Feb. 11	11.50
1954		Feb. 24	11.00
Jan. 18	13.00	Mar. 5	11.50
Feb. 18	12.50	April 1	11.00
Mar. 9	12.75	April 20	11.50
Mar. 10	13.00	May 7	12.00
Mar. 26	13.25	Aug. 24	13.00
Mar. 29	13.50	Dec. 14	12.50
Apr. 1	13.75	Dec. 21	12.00
Apr. 12	14.00	1960	
June 2	14.25	Dec. 13	11.00

**OPS Ceiling.

Antimonial Lead Stocks at Primary Refineries

(A.B.M.S.)

(In tons of 2,000 pounds)

End of	1957	1958	1959	1960
Jan.	10,487	12,689	11,789	12,297
Feb.	10,220	12,309	12,111	12,654
Mar.	5,091	3,527	4,098	2,332
Apr.	9,391	12,468	13,355	12,831
May	9,799	13,154	13,596	13,878
June	9,503	12,856	12,321	13,221
July	8,661	10,482	13,143	13,728
Aug.	9,553	10,889	7,915	13,654
Sept.	10,215	11,004	7,769	11,888
Oct.	11,581	12,050	7,569	11,540
Nov.	11,119	11,828	7,625	12,502
Dec.	11,857	12,595	11,991	11,115

Antimonial Lead Production by Primary Refineries

(A.B.M.S.)

(In tons of 2,000 pounds)

End of	1957	1958	1959	1960
Jan.	5,114	3,743	3,541	2,538
Feb.	5,468	3,657	4,415	2,694
Mar.	9,794	12,144	12,065	12,679
Apr.	6,183	3,655	5,533	2,291
May	6,978	4,827	4,616	3,456
June	4,466	3,992	5,671	2,260
July	5,372	2,775	2,784	2,363
Aug.	7,967	5,244	2,185	2,701
Sept.	7,574	4,761	102	1,721
Oct.	6,148	5,849	886	3,205
Nov.	3,791	3,913	1,324	3,389
Dec.	3,290	4,539	2,656	768
Total	67,541	50,482	37,813	29,718

Lead Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

		1960	
	Aug.	Sept.	Oct.
IMPORTS			
U. S.* ....(s.t.)	24,264	8,766	12,915
Canada ..(s.t.)	1	...	...
Belgium	1,692	1,962	...
Denmark	1,078	679	1,896
France	4,881	2,726	4,683
Germany, W. †	6,912	6,817	...
Italy**	1,692	...	...
Netherlands ...	2,793	3,043	3,217
Norway	294	...	...
Sweden	848	1,058	...
Switzerland ...	1,609	996	2,437
U. K. ....(l.t.)	20,888	16,442	19,626
India‡ ....(l.t.)	2,063	932	...
EXPORTS			
U. S.* ..(s.t.)	46	56	482
Canada ..(s.t.)	9,080	1,801	14,387
Belgium	3,372	3,815	...
Denmark	276	142	450
France	536	299	568
Germany, W.†	2,033	1,450	...
Netherlands ...	833	525	623
Sweden	1,183	1,443	...
N. Rhodesia‡ l.t.	1,476	800	1,616
Australia .(l.t.)	15,119	...	...

* Refined.
† Includes scrap.
** Includes lead alloys.
‡ British Bureau of Non-Ferrous Metal Statistics.

French Lead Imports

(A. B. M. S.)

(In metric tons)

	1960		
	Sept.	Oct.	Nov.
Ore (gross weight)	9,194	4,952	8,498
Canada	..	957	...
Algeria	70	...	...
Morocco	9,124	3,995	6,441
Other countries	...	...	2,057
Pig lead	2,726	4,683	4,425
Peru	102	...	...
Belgium	997	1,602	814
Germany (W.).	500	275	275
Spain	100	100	100
Algeria	6	30	...
Morocco	325	905	803
Tunisia	417	1,767	2,413
Australia	279	...	..
Other countries	...	4	20
Antimonial lead	1	25	33

U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1960		
	Sept.	Oct.	Nov.
(Gross Weight)			
Lead and lead alloys 16,442		19,626	20,004
Australia 10,263		10,591	15,028
Canada	2,845	3,724	2,651
Belgium	...	300	...
Peru	699	700	350
Other countries.	2,635	4,311	1,975

U. S. Lead Consumption

(Bureau of Mines — In Short Tons)

	1960		
Metal Products	Jan.-Oct.	Sept.	Oct.
Ammunition	36,614	3,737	3,724
Bearing metals	17,293	1,643	1,422
Brass and bronze	17,105	1,609	1,646
Cable covering	50,188	4,999	4,916
Calking lead	57,763	5,891	5,499
Casting metals	5,415	450	335
Collapsible tubes	7,035	984	865
Foil	3,105	241	166
Pipes, traps and bends	19,083	1,815	1,538
Sheet lead	22,806	2,406	2,026
Solder	48,731	4,686	4,781
Storage battery grids, posts, etc.	141,408	14,556	14,607
Storage battery oxides..	146,881	14,648	15,481
Terne metal	1,712	35	97
Type metal	21,343	2,104	2,027
Total	**596,482**	**59,804**	**59,130**
Pigments:			
White lead	7,260	881	589
Red lead and litharge..	64,373	5,202	6,312
Pigment colors	9,774	922	900
Other*	2,205	210	234
Total	**83,612**	**7,215**	**8,035**
Chemicals:			
Tetraethyl lead	138,777	14,944	14,614
Miscellaneous chemicals	2,223	436	305
Total	**141,000**	**15,380**	**14,919**
Miscellaneous Uses:			
Annealing	3,775	359	337
Galvanizing	1,025	91	60
Lead plating	53	2	14
Weights and ballast ...	6,245	705	615
Total	**11,098**	**1,157**	**1,026**
Other uses unclassified.	13,556	1,319	910
Total reported† ...	**845,748**	**84,875**	**84,020**
Estimated undistributed consumption	20,000	2,000	2,000
Grand total†	**865,700**	**86,900**	**86,000**
Daily average‡	**2,838**	**2,897**	**2,774**

* Includes lead content of leaded zinc oxide production.
† Includes lead content of scrap used directly in fabricated products.
‡ Based on number of days in month without adjustment for Sundays and holidays.

U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 pounds)

	1958	1959	1960
Jan.	29,607	28,872	31,745
Feb.	27,855	25,968	30,241
Mar.	29,713	26,691	35,066
Apr.	26,230	29,252	28,148
May	28,839	27,280	33,459
June	28,624	30,099	33,318
July	27,201	26,851	27,913
Aug.	21,726	25,358	28,735
Sept.	28,829	30,255	34,274
Oct.	31,356	32,926	32,680
Nov.	27,786	32,579	...
Dec.	27,154	31,772	...
Total ..	**335,920**	**345,903**	

American Antimony

Monthly Average Prices
In bulk, f.o.b. Laredo
(Cents per lb. in ton lots)

	1957	1958	1959	1960
Jan.	33.00	33.00	29.00	29.00
Feb.	33.00	30.818	29.00	29.00
Mar.	33.00	29.00	29.00	29.00
Apr.	33.00	29.00	29.00	29.00
May	33.00	29.00	29.00	29.00
June	33.00	29.00	29.00	29.00
July	33.00	29.00	29.00	29.00
Aug.	33.00	29.00	29.00	29.00
Sept.	33.00	29.00	29.00	29.00
Oct.	33.00	29.00	29.00	29.00
Nov.	33.00	29.00	29.00	29.00
Dec.	33.00	29.00	29.00	29.00
Aver.	**33.00**	**29.485**	**29.00**	**29.00**

Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — In Short Tons)

	Stocks Sept. 30, 1960	Net Receipts in Oct.	Consumed in Oct.	Stocks Oct. 31, 1960
Soft lead	69,029	47,595	55,136	61,488
Antimonial lead	40,677	20,659	20,702	40,634
Lead in alloys	7,386	3,219	3,346	7,259
Lead in copper-base scrap..	1,032	1,380	1,329	1,083
Total	118,124	72,853	*80,513	110,464

* Excludes 3,276 tons of lead which went directly from scrap to fabricated products and 231 tons of lead contained in leaded zinc oxide production.

Consumption of Lead by Class of Product

(Bureau of Mines — In Short Tons)

OCTOBER

	Soft lead	Antimonial lead	Lead in alloys	Lead in copper-base scrap	Total
Metal products	31,037	20,292	3,269	1,329	55,927
Pigments	7,744	18	42	....	7,804
Chemicals	14,919	....	....	....	14,919
Miscellaneous	639	387	....	....	1,026
Unclassified	797	5	35	....	837
Total	55,136	20,702	3,346	1,329	*80,513

* Excludes 3,276 tons of lead which went directly from scrap to fabricated products and 231 tons of lead contained in leaded zinc oxide production.

Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included.

(Tons of 2,000 lbs.)

	Stock Beginning	Production	Shipments—Domestic	Shipments—Export & Drawback	Shipments—Gov't Acc't	Shipments—Total	Stock at End	Daily Avg. Prod.
1950 Tl.	94,221	910,354	849,246	18,189	128,256	995,691	8,884	2,494
1950 Mo. Avg.		75,863	70,770	1,516	10,688	82,974		
1951 Total	8,884	931,833	836,800	42,067	39,949	918,816	21,901	2,553
1951 Mo. Avg.		77,653	69,733	3,506	3,329	76,568		
1952 Total	21,901	961,430	803,343	56,202	36,626	896,171	87,160	2,627
1952 Mo. Avg.		80,119	66,945	4,683	3,052	74,681		
1953 Total	87,160	971,191	818,850	16,326	42,332	877,508	180,843	2,661
1953 Mo. Avg.		80,933	68,238	1,361	3,528	73,126		
1954 Total	180,843	868,242	787,922	27,929	108,957	924,808	124,277	2,379
1954 Mo. Avg.		72,353	65,660	2,327	9,080	77,067		
1955 Total	40,979	1,031,018	1,007,619	19,497	87,200	1,114,316	40,979	2,825
1955 Mo. Avg.		85,918	83,968	1,625	7,267	92,860		
1956 Total		1,062,954	869,270	9,027	157,014	1,035,311	68,622	2,904
1956 Mo. Avg.		88,850	72,439	752	13,085	86,275		
1957 Total		1,067,450	765,132	15,460	179,466	815,567		
1958								
November	210,176	65,174	83,394	212	....	83,606	191,744	2,172
December	191,744	75,503	76,862	148	....	77,010	190,237	2,432
1958 Total		828,902	767,755	3,102	34,488	805,325	....	....
1959								
January	190,237	76,481	70,770	171	....	70,941	195,777	2,467
February	195,777	71,174	65,641	849	....	66,490	200,461	2,542
March	200,461	79,918	73,814	482	....	74,296	206,083	2,578
April	206,083	76,393	78,358	255	....	78,613	203,863	2,546
May	203,863	77,489	85,073	275	....	85,348	196,004	2,500
June	196,004	75,544	99,858*	204	2,100	102,162	169,386	2,518
July	169,386	73,101	59,460	94	900	60,454	182,033	2,358
August	182,033	69,768	58,918	864	....	59,782	192,019	2,251
September	192,019	62,202	57,971	3,214	....	61,185	193,036	2,073
October	193,036	63,938	63,910	1,813	....	65,723	191,251	2,063
November	191,251	62,346	74,596	2,844	....	77,440	176,157	2,078
December	176,157	69,666	84,498	6,906	....	91,404	154,419	2,247
1959 Total		858,020	872,867	17,971	3,000	893,838	....	....
1960								
January	154,419	73,326	79,325	3,949	....	83,274	144,471	2,365
February	144,471	74,738	78,029	4,118	....	82,147	137,062	2,577
March	137,062	86,028	80,760	5,764	....	86,524	136,566	2,775
April	136,566	83,221	64,251	7,675	....	71,926	147,861	2,774
May	147,861	79,216	54,790	7,399	....	62,039	165,038	2,555
June	165,038	76,723	50,690	3,385	....	54,075	187,686	2,557
July	187,686	73,754	50,002	4,379	....	54,381	207,059	2,379
August	207,059	63,840	64,287	5,908	....	70,255	200,644	2,128
September	200,644	60,004	58,137	10,045	....	68,182	192,466	2,000
October	192,466	63,005	58,572	6,611	....	65,183	190,288	2,032
November	190,288	60,841	56,981	11,999	....	68,980	182,149	2,028
December	182,149	72,933	46,094	18,178	....	64,272	190,810	2,353
1960 Total	....	867,629	743,018	88,220	....	831,238	....	....

* Inflated by abnormal shipments on consignment of approximately 9,000 tons.

U. S. Consumption of Slab Zinc

Bureau of Mines

By Industries (Short Tons)

	Galvanizers	Die Casters	Brass products	Rolled zinc	Zinc oxide & other	Total
1951 Total	386,373	266,442	141,456	64,000	28,738	887,009
1952 Total	375,563	236,022	155,311	51,508	30,885	849,289
1953 Total	403,162	305,246	177,301	53 784	38,037	977,636
1954 Total	398,599	286,817	107,293	45,979	33,342	876,130
1955 Total	439,694	404,790	144,816	50,363	39,302	1,081,468
1956 Total	421,218	352,451	122,395	45,382	36,251	983,097
1957 Total	355,796	358,543	111,114	39,544	20,486	924,063
1958						
September	34,048	25,188	9,624	3,458	770	74,122
October	36,513	27,682	11,753	3,845	881	81,919
November	31,658	27,311	10,067	3,276	826	74,302
December	31,746	29,926	10,529	3,681	1,018	78,082
Total	370,441	273,540	92,906	38,690	16,772	737,942
1959						
January	31,729	29,110	11,172	3,874	2,521	79,506
February	31,672	26,448	11,508	3,418	2,864	77,010
March	37,287	29,286	12,889	3,629	3,203	87,394
April	38,541	31,262	12,304	3,715	3,223	90,145
May	38,788	29,169	12,015	3,316	3,305	88,093
June	40,531	36,269	10,764	3,801	3,120	95,985
July	23,700	28,120	7,558	2,509	2,042	65,429
August	13,763	29.803	10.064	3.160	2.161	60.451
September	13,181	31,463	10,842	3,322	2,237	62,545
October	13,582	35,473	10,543	3,272	2,487	66,857
November	25,456	29,351	8,858	3,411	2,523	71,099
December	38,418	34,576	8,704	3,152	2,936	89,286
Total	346,648	370,330	127,221	40,759	22,622	933,800
1960						
January	38,389	31,813	9,838	3,130	3,352	88,122
February	35,001	34,829	9,259	3,250	3,156	87,365
March	36,206	31,889	10,108	3,309	3,403	86,515
April	31,319	24,483	7,097	3,032	3,033	71,164
May	31,503	22,957	7,697	3,402	3,386	70,545
June	31,882	25,625	8,541	3,181	2,814	73,883
July	24,735	18,895	4,610	2,118	2,979	55,237
August	28,157	25,560	8,307	3,258	1,331	68,513
September	26,210	26,936	8,035	2,435	2,407	67,023
October	26,300	26,547	9,063	2,860	1,057	67,827

Prime Western Zinc Prices

(East St. Louis, f.o.b.)

(Cents Per Pound)
(In tons of 2,240 pounds)

	1957	1958	1959	1960
Jan.	13.50	10.00	11.50	12.90
Feb.	13.50	10.00	11.411	13.00
Mar.	13.50	10.00	11.00	13.00
Apr.	13.50	10.00	11.00	13.00
May	11.933	10.00	11.00	13.00
June	10.84	10.00	11.00	13.00
July	10.00	10.00	11.00	13.00
Aug.	10.00	10.00	11.00	13.00
Sept.	10.00	10.00	11.381	13.00
Oct.	10.00	10.865	12.233	13.00
Nov.	11.35	12.386	13.75	13.00
Dec.	10.00	11.50	12.50	12.476
Aver.	11.40	10.313	11.46	12.948

High Grade Zinc Prices

(Delivered)
N. Y. Monthly Averages
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	14.85	11.35	12.50	14.244
Feb.	14.85	11.35	12.411	14.25
Mar.	14.85	11.35	12.00	14.25
Apr.	14.85	11.084	12.00	14.50
May	13.283	11.00	12.00	14.50
June	12.19	11.00	12.00	14.50
July	11.35	11.00	12.00	14.35
Aug.	11.35	11.00	12.006	14.35
Sept.	11.35	11.00	12.625	14.35
Oct.	11.35	11.865	13.483	14.35
Nov.	11.35	12.386	13.75	14.35
Dec.	11.35	12.50	13.75	13.826
Aver.	12.75	11.407	12.544	14.318

U. K. Zinc Consumption

(British Bureau of Non-Ferrous Metal Statistics)
(In Tons of 2,240 Pounds)

	1958	1959	1960
Jan.	27,473	27,849	30,637
Feb.	24,551	25,676	30,480
Mar.	26,967	27,243	35,268
Apr.	24,984	28,006	28,069
May	24,579	26,167	30,848
June	25,587	30,221	33,058
July	23,794	26,318	25,594
Aug.	19,076	21,566	25,764
Sept.	26,747	31,270	33,163
Oct.	29,838	30,686	30,598
Nov.	26,432	29,221	...
Dec.	26,042	30,829	...
Total	306,070	335,890	...

Zinc Smelters' Production, Deliveries and Stocks

(American Bureau of Metal Statistics)

(In tons of 2,000 pounds)

COMBINED TOTALS ALL REPORTING AREAS

	Slab Zinc Production	Deliveries to Consumers: O.E.E.C. Countries	Deliveries to Consumers: U. S. A.	Deliveries to Consumers: All Other Destinations	Total	Stocks Slab Zinc End of Period
1958	2,286,786	.....	.....	.....	N.A.	N.A.
1959	2,343,189	.....	.....	.....	N.A.	N.A.
1960						
11 mos.	2,200,391	.....	.....	.....	N.A.	296,489
Jan.	202,299	.....	.....	.....	N.A.	250,757
Feb.	197,159	.....	.....	.....	214,114	233,802
Mar.	221,142	.....	.....	.....	217,170	237,774
Apr.	213,081	.....	.....	.....	191,067	259,788
May	211,680	.....	.....	.....	189,167	282,301
June	206,906	.....	.....	.....	184,248	304,959
July	198,404*	.....	.....	.....	N.A.*	328,208*
Aug.	188,898	.....	.....	.....	187,185	329,921
Sept.	183,255	.....	.....	.....	203,308	309,868
Oct.	192,060	96,711	60,623	33,159	190,493	311,655
Nov.	185,507	105,125	65,665	29,883	200,673	296,489
ORGANIZATION FOR EUROPEAN ECONOMIC COOPERATION						
1958	938,237	.....	.....	.....	N.A.	N.A.
1959	968,164	.....	.....	.....	N.A.	N.A.
1960						
11 mos.	917,203	.....	.....	.....	N.A.	49,398
Jan.	84,138	.....	.....	.....	N.A.	59,293
Feb.	80,153	.....	.....	.....	86,493	52,953
Mar.	89,151	.....	.....	.....	91,839	50,265
Apr.	86,578	.....	.....	.....	81,087	55,756
May	87,421	.....	.....	.....	83,087	60,090
June	86,990	.....	.....	.....	83,586	63,494
July	80,233*	.....	.....	.....	N.A.*	57,290*
Aug.	80,775	.....	.....	.....	74,002	64,072
Sept.	79,550	.....	.....	.....	84,774	58,848
Oct.	81,865	80,780	709	3,542	85,031	55,902
Nov.	80,349	82,095	1,256	3,502	86,853	49,398
UNITED STATES						
1958	828,902	N.A.	767,735	3,102†	770,837	190,237
1959	858,020	N.A.	872,867	17,791†	890,658	154,419
1960						
11 mos.	794,696	36,759	696,924	33,283	766,966	182,149
Jan.	73,326	3,190	79,625	459	83,274	144,471
Feb.	74,738	1,149	78,329	2,669	82,147	137,062
Mar.	86,028	2,342	80,960	3,222	86,524	136,566
Apr.	83,221	5,921	64,551	1,454	71,926	147,861
May	79,216	5,005	54,790	2,244	62,039	165,038
June	76,723	1,960	50,690	1,425	54,075	187,686
July	73,754	2,212	50,002	2,167	54,381	207,059
Aug.	63,840	3,753	64,287	2,215	70,255	200,644
Sept.	60,004	2,153	58,137	7,892	68,182	192,466
Oct.	63,005	3,680	58,572	2,931	65,183	190,288
Nov.	60,841	5,394	56,981	6,605	68,980	182,149
ALL OTHER REPORTING AREAS						
1958	519,647	140,149	128,503	240,375	509,027	48,061
1959	517,005	155,050	118,239	249,086	522,375	42,579
1960						
11 mos.	488,492	128,944	75,854	261,331	466,129	64,942
Jan.	44,835	9,903	8,529	21,989	40,421	46,993
Feb.	42,268	11,225	9,192	25,057	45,474	43,787
Mar.	45,963	8,987	8,434	21,386	38,807	50,943
Apr.	43,282	11,642	4,002	22,410	38,054	56,171
May	45,043	12,114	6,631	25,296	44,041	57,173
June	43,193	12,726	9,932	23,929	46,587	53,779
July	44,417	9,649	2,192	22,505	34,346	63,850
Aug.	44,283	12,934	5,774	24,220	42,928	65,205
Sept.	43,701	9,877	12,398	28,077	50,352	58,554
Oct.	47,190	12,251	1,342	26,686	40,279	65,465
Nov.	44,317	17,636	7,428	19,776	44,840	64,942

* Data under "Combined" and "O.E.E.C." sections, starting with month of July, 1960 not comparable to previous periods due to the exclusion of a reporting area.
† Represents deliveries to O.E.E.C. countries and to "all other destinations."
N.A.—Not available.

U. S. Consumers' Stocks of Slab Zinc

(U. S. Bureau of Mines) (Per Net Ton)

End of:	1953	1954	1955	1956	1957	1958	1959	1960
Jan.	87,244	82,385	97,013	122,514	90,500	87,169	85,080	100,226
Feb.	86,903	78,560	101,734	125,171	88,232	82,428	83,420	97,096
Mar.	86,882	82,434	102,438	127,236	89,626	75,955	79,161	100,404
Apr.	87,580	90,154	103,304	128,050	84,648	71,820	76,295	96,714
May	92,043	88,800	104,003	119,275	71,124	70,224	76,427	85,853
June	102,383	94,566	106,983	108,557	70,632	63,398	86,173	74,471
July	108,115	98,745	114,115	103,988	72,288	62,959	90,165	72,180
Aug.	104,589	95,666	120,943	98,812	74,078	63,484	93,197	69,429
Sept.	97,159	93,872	120,262	95,269	71,919	62,278	92,842	67,477
Oct.	87,640	93,362	115,681	94,197	71,844	74,316	94,787	....
Nov.	86,177	96,076	117,752	97,580	74,095	81,386	95,047	....
Dec.	84,863	100,757	120,340	101,537	85,006	89,261	92,375	....

Prime Western Zinc Price Changes

East St. Louis, Ill. basis, cents per pound. Mean given when range was quoted.

1950			1954		
Jan.	17...	9.75	Jan.	18...	9.50
Mar.	14...	10.00	Feb.	15...	9.25
	27...	10.25	Mar.	10...	9.75
Apr.	3...	10.50		29...	10.25
	19...	11.00	May	26...	10.50
May	1...	11.25	June	3...	11.00
	4...	11.50	Sept.	3...	11.25
	9...	12.00		7...	11.50
	24...	12.50	1955		
	29...	13.00	Apr.	5...	11.75
June	2...	14.50		6...	12.00
	12...	15.00	June	16...	12.50
Sept.	7...	17.50	Sept.	6...	13.00
1951			Oct.	17...	13.25
Oct.	2...	19.50		19...	13.00
1952			1956		
June	2...	17.50	Jan.	6...	13.50
	5...	16.00	1957		
	18...	15.00	May	6...	12.00
Aug.	6...	13.50		13...	11.50
	11...	13.75	June	4...	11.00
	12...	14.00		19...	10.50
Sept.	12...	14.50	July	1...	10.00
	18...	14.00	1958		
	22...	13.50	Oct.	2...	10.50
	23...	13.75		8...	11.00
	24...	13.50	Nov.	7...	11.25
	25...	13.75		10...	11.50
Oct.	8...	13.50	1959		
	23...	12.50	Feb.	25...	11.00
1953			Sept.	21...	12.00
Jan.	2...	13.00	Oct.	21...	12.50
	14...	12.50		23...	12.75
	27...	12.00	Nov.	2...	12.50
Feb.	3...	11.50	1960		
	25...	11.25	Jan.	8...	13.00
Mar.	5...	11.00	Dec.	13...	12.50
Sept.	2...	10.50	Dec.	19...	12.00
	11...	10.00			

Imports and Consumption of Nickel in U. S.*

Imported nickel products and consumption in pounds of nickel content.

	Imports**	Consumption†
1955	285,195,000	214,677,000
1956	284,684,000	252,000,000
1957	283,790,000	244,698,000
1958	216,363,000	157,313,000
1959		
Jan.	15,384,000	16,978,000
Feb.	13,566,000	20,539,000
Mar.	26,179,000	21,863,000
Apr	25,343,000	23,227,000
May	21,327,000	25,281,000
June	25,671,000	22,162,000
July	14,470,000	9,688,000
Aug.	19,058,000	14,718,000
Sept.	25,140,000	13,733,000
Oct.	16,200,000	14,102,000
Nov.	21,130,000	19,217,000
Dec.	20,680,000	25,536,000
Total	**243,148,000**	**227,522,000**
1960		
Jan.	19,034,000	23,305,728
Feb.	21,696,000	22,480,596
Mar.	18,082,000	20,747,039
Apr.	14,973,000	18,290,510
May	10,440,000	16,295,593
June	9,572,000	16,388,162
July	16,625,000	8,526,335
Aug.	11,217,000	16,534,167
Sept.	13,507,000	15,515,747

* Exclusive of scrap. ** Estimated. † Estimated consumption by all companies. Source: Bureau of Mines, U. S. Department of Interior.

Mine Production of Zinc in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern States	Central States	Western States	Total U.S.*
1954				
Total	166,487	63,100	234,942	464,539
1955				
Total	163,220	73,630	277,811	514,671
1956				
Total	175,310	61,080	301,253	537,643
1957				
Total	196,877	29,506	290,151	520,128
1958				
Total	180,373	10,050	221,582	412,005
1959				
June	18,217	——	18,447	36,664
July	13,158	——	18,656	31,814
Aug.	14,410	140	16,661	31,211
Sept.	14,226	154	15,026	29,406
Oct.	15,608	200	15,979	31,487
Nov.	18,285	200	15,698	34,183
Dec.	19,609	106	15,757	35,472
Total	204,384	800	211,781	416,965
1960				
Jan.	20,962	226	15,795	36,983
Feb.	21,001	195	16,823	38,019
Mar.	22,794	347	19,725	42,866
Apr.	22,410	606	17,839	40,855
May	23,103	408	17,235	40,746
June	22,004	575	16,491	39,070
July	21,083	823	15,036	36,942
Aug.	18,805	902	13,704	33,411
Sept.	16,525	853	12,917	30,295
Oct.	15,046	752	12,267	28,065

*Includes Alaskan output in some months.

Mine Production of Lead in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern States	Central States	Western States	Total U.S.*
1953				
Ttl.	9,970	136,650	188,776	335,412
1954				
Ttl.	8,608	138,940	169,804	317,352
1955				
Ttl.	10,379	145,640	177,409	333,409
1956				
Ttl.	11,395	141,900	195,034	348,329
1957				
Ttl.	9,300	135,800	188,392	333,493
1958				
Ttl.	6,439	118,114	142,824	267,377
1959				
Aug.	353	9,762	11,735	21,850
Sept.	510	9,698	10,328	20,536
Oct.	548	10,012	10,755	21,315
Nov.	620	9,350	10,954	20,924
Dec.	550	8,734	10,572	19,856
Ttl.	6,535	105,435	141,290	253,260
1960				
Jan.	535	9,035	11,235	20,805
Feb.	555	9,611	12,267	22,433
Mar.	619	11,146	13,695	25,460
Apr.	647	9,716	12,750	23,113
May	624	9,395	10,720	20,738
June	585	9,749	9,002	19,356
July	598	8,301	8,462	17,361
Aug.	...	...	...	18,460
Sept.	...	...	...	18,079
Oct.	...	...	...	18,137
Nov.	...	...	...	18,071

Mine Production of Gold in United States

(U. S. Bureau of Mines)

(In fine ounces)

	Eastern States	Western States	Alaska*	Total
1955				
Ttl.	2,026	1,634,625	247,535	1,884,186
1956				
Ttl.	1,998	1,607,930	204,300	1,814,228
1957				
Ttl.	2,174	1,556,450	210,000	1,768,624
1959				
July	—	——	33,324	171,749
Aug.	—	——	37,534	146,907
Sept.	—	——	30,886	114,364
Oct.	—	——	29,349	117,314
Nov.	—	——	2,903	91,175
Dec.	—	——	17,294	106,525
Ttl.	—	——	188,294	1,618,446
1960				
Jan.	—	——	2,460	——
Feb.	—	——	1,064	108,652
Mar.	—	——	231	120,928
Apr.	—	——	43	121,017
May	—	——	4,919	141,861
June	—	——	5,504	140,058
July	—	——	28,493	156,573
Aug.	—	——	33,033	153,163
Sept.	—	——	35,480	173,799
Oct.	..	——	25,642	166,784

* Alaska totals based on mint and smelter receipts

Mine Production of Recoverable Silver in United States

(U. S. Bureau of Mines)

(In Fine Ounces)

	Eastern States	Missouri	Western States	Alaska*	Total
1957 Total	610,386	240,000	37,018,950	26,000	37,895,336
1958 Total	†	210,000	†	28,000	33,022,225
1959					
August	†	10,600	†	5,523	2,291,540
September	†	10,400	†	3,224	1,794,029
October	†	10,900	†	3,793	1,952,629
November	†	10,400	†	469	1,874,624
December	†	10,140	†	2,334	1,825,198
Total	†	169,000	†	24,134	30,349,334
1960					
January	†	18,300	†	321	1,962,523
February	†	200	†	312	2,370,150
March	†	100	†	17	2,858,903
April	†	100	†	5	2,989,208
May	†	100	†	627	2,802,172
June	†	200	†	753	2,348,591
July	†	200	†	4,033	2,480,343
August	†	200	†	5,004	2,460,567
September	†	200	†	4,764	2,443,882
October	†	...	†	2,537	2,222,340

† Figures not available. * Alaska totals based on mint and smelter receipts.

Production of Primary Aluminum in the U. S.

(U. S. Bureau of Mines)

(In short tons)

	1953	1954	1955	1956	1957	1958	1959	1960
Jan.	89,895	116,247	128,203	140,394	147,029	139,910	156,708	164,024
Feb.	92,649	110,483	116,236	132,763	119,059	121,980	142,116	156,826
Mar.	104,460	122,339	130,272	145,895	135,706	134,019	157,189	170,688
Apr.	102,071	120,434	126,394	144,726	139,152	128,559	155,213	168,596
May	105,464	125,138	131,128	150,800	145,174	129,083	163,857	175,863
June	104,152	120,758	127,634	145,726	138,007	115,325	167,323	171,356
July	109,285	126,161	132,669	151,624	142,157	118,811	179,594	177,564
Aug.	110,545	125,296	133,551	92,406	143,449	125,416	172,817	172,973
Sept.	109,333	120,332	130,606	132,316	129,278	124,713	168,205	162,882
Oct.	108,219	125,089	134,655	149,125	133,759	139,847	173,762	167,015
Nov.	105,636	121,252	133,689	145,081	135,024	140,962	153,666	161,208
Dec.	110,291	127,056	140,748	148,391	140,033	153,301	162,996	....
Ttl.	1,252,013	1,460,565	1,565,721	1,679,427	1,647,710	1,655,556	1,953,019	....

U. S. Silver Production*

(A.B.M.S.)

(In thousands of ounces; commercial bars, 0.999 fine, and other refined forms)

	Dom.†	For.	Total
1954 Total	38,059	39,422	77,481
1955 Total	33,101	32,780	65,881
1956 Total	38,157	40,160	78,317
1957 Total	36,279	34,932	71,211
1958 Total	35,691	37,572	73,263
1959			
June	3,219	3,231	6,450
July	2,609	3,284	5,893
August	1,472	1,229	2,701
September	390	577	967
October	510	610	1,120
November	635	602	1,237
December	756	4,311	5,067
Total	23,158	32,021	55,179
1960			
January	3,327	2,830	6,157
February	3,454	3,496	6,950
March	4,010	4,259	8,269
April	3,866	4,158	8,024
May	3,425	4,018	7,443
June	3,278	3,924	7,202
July	2,817	3,799	6,616
August	3,115	4,293	7,408
September	2,145	2,872	5,287
October	2,918	3,165	6,083
November	3,405	4,268	7,673

* The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.

† Includes purchases of crude silver by the U. S. Mint.

Average Silver Prices

(Cents per fine ounce)

	1957	1958	1959	1960
Jan.	91.375	89.449	90.19	91.375
Feb.	91.375	88.625	90.444	91.375
Mar.	91.375	88.625	91.351	91.375
Apr.	91.375	88.625	91.375	91.375
May	91.307	88.625	91.375	91.375
June	90.456	88.625	91.375	91.375
July	90.31	88.625	91.375	91.375
Aug.	90.909	88.625	91.399	91.375
Sept.	90.602	88.673	91.399	91.375
Oct.	90.625	89.966	91.375	91.375
Nov.	90.382	90.125	91.375	91.375
Dec.	89.80	89.932	91.375	91.375
Aver.	90.824	89.043	91.226	91.375

Note — The averages are based on the price of refined bullion imported on or after August 31, 1943.

U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	Sept.	Oct.	Nov.
Ore, matte, etc (cont.)	16,102	9,897	6,978
Canada	1,945	1,604	284
Mexico	149	49	108
Guatemala	176	....	....
Honduras	457	76	181
Bolivia	1,128	1,186	2
Colombia	....	353	....
Peru	4,086	1,617	3,735
Morocco	....	....	1,804
Union of South Africa	7,957	3,730	....
Australia	12	1,179	821
Philippines	5	58	13
Korea	175	45	30
Other countries	12	....	....
Pigs and bars	8,766	12,915	19,151
Canada	50	2,194	3,634
Mexico	4,673	4,770	6,514
Peru	4,043	2	751
Spain	....	1,229	....
Yugoslavia	....	2,470	4,579
Australia	....	2,241	3,673
Other countries	....	9	....
Total Imports:			
Ore, base bullion, ref...	24,868	22,812	26,129
Lead scrap, dross, etc. (content)	213	1,418	367
Antimonial lead and typemetal	364	237	335
Lead content thereof	293	185	265

U. S. Copper Scrap Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	Sept.	Oct.	Nov.
Copper scrap, unalloyed* (new and old)	5,033	5,273	5,204
Canada	315	1,993	359
Belgium	336	195	54
France	66	34	180
Germany (West)	845	1,043	1,533
Italy	161	81	204
Netherlands	151	155	165
Spain	585	710	1,315
Sweden	201	100	...
Yugoslavia	58	17	674
United Kingdom	300	44	27
India	111	66	104
Japan	1,802	753	497
Hong Kong	...	...	28
Other countries	102	82	64
Copper-base scrap, alloyed† (new and old)	12,537	12,075	11,515
Canada	3	...	32
Mexico	64	5	452
Belgium	...	48	...
France	11	107	...
Germany (West)	671	675	1,026
Italy	845	776	958
Netherlands	36	375	101
Spain	55	5	...
Switzerland	78	146	112
United Kingdom	69	56	48
India	223	84	274
Japan	10,441	9,703	8,025
Hong Kong	16	...	...
Other countries	25	95	‡487

* Ash, brassmill, clippings, dross, flue dust, residues, scale, skimmings, wire scrap.

† Copper-base alloys, including brass and bronze—Ashes, clippings for remanufacture, cupro-nickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper, skimmings, turnings, round.

‡ Includes 413 tons to Yugoslavia.

U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	Sept.	Oct.	Nov.
Ore, matte and regulus (content)	7,105	1,919	4,152
Canada	545	605	961
Mexico	2	119	124
Bolivia	198	...	...
Chile	1,221	...	1,206
Peru	1,069	220	680
Philippines	2,341	16	1,014
Union of South Africa	1,729	922	...
Australia	...	37	158
Other countries	...	...	9
Blister copper (cont.)	21,323	39,556	15,332
Mexico	2,098	2,057	1,737
Chile	15,127	25,432	8,518
Peru	2,434	12,067	3,694
Union of South Africa	1,664	...	1,383
Refined cathodes and shapes	7,675	6,607	7,068
Canada	7,675	6,607	7,068
Total Imports:			
Crude and refined	36,103	48,082	26,552
Old and scrap (cont.)	24	93	64
Composition metal (cont.)	1	...	...
Brass scrap and old (cu. cont.)	123	93	11

U. S. Copper Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	Sept.	Oct.	Nov.
Ore, concentrates, matte and other unrefined (content)	1,524	840	552
Refined ingots, bars, etc.†	42,919	37,207	30,451
Canada	157	66	108
Mexico	2	...	...
Argentina	1,475	1,716	923
Brazil	1,565	1,784	1,349
Austria	3	...	11
Belgium	336	425	...
Denmark	167	28	...
Finland	529	...	75
France	6,502	5,052	4,242
Germany (West)	9,029	11,237	9,256
Greece	112	64	168
Italy	5,999	5,824	2,863
Netherlands	1,987	812	644
Norway	336	112	336
Sweden	168	852	1,392
Switzerland	616	916	1,034
United Kingdom	7,793	5,255	4,300
Yugoslavia	792	198	973
Taiwan	161	55	55
India	151	...	698
Japan	4,128	2,040	1,669
Australia	896	672	336
Other countries	15	99	19
Total Exports:			
Crude and refined	44,443	38,047	31,003
Pipes and tubes	105	49	84
Plates and sheets	58	71	47
Semifabricated forms	601	481	422
Wire, bars	163	604	214
Building wire and cable*	259	135	104
Weatherproof wire*	1	...	5
Insulated copper wire n.e.s.*	382	720	631

† Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.

* Gross weight; n.e.s.—not elsewhere specified.

Comparative Metal Prices

	Av. 1939	OPA Av. 1946	1961 Dec. 20
Copper, domestic Electro., del. Val.	11.20	14.375	29.00
Lead (N. Y.)	5.05	8.25	11.00
P. W. Zinc (E. St. Louis, f.o.b.)	5.05	5.05	11.50
New York, del.	...	...	12.00
Tin Spot Straits, N. Y.	...	...	100.875
Aluminum ingot 99½%+	20.00	15.00	26.00
Antimony (R.M.M. brand f.o.b. Laredo)	12.36	14.50	29.00

U. S. Zinc Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	Sept.	Oct.	Nov.
Zinc ore (content)	40,558	30,391	35,457
Canada	9,200	10,538	6,430
Mexico	12,138	13,462	20,798
Guatemala	1,744	...	...
Honduras	633	460	79
Bolivia	188	44	...
Colombia	...	39	...
Peru	10,729	3,163	7,453
Union of South Africa	1,038	1,092	...
Australia	4,201	306	657
Philippines	664	1,285	38
Other countries	23	2	2
Zinc blocks, pigs, etc.	17,272	7,923	11,244
Canada	10,854	4,519	6,549
Mexico	500	...	563
Peru	1,709	100	549
Belgium	112	496	606
Germany (West)	110	1,129	...
Italy	...	...	276
Spain	1,378	1,432	...
United Kingdom	56	...	...
Yugoslavia	551	192	882
Belgian Congo	2,002	55	1,819
Total Imports:			
Zinc ore, blocks, pigs	57,830	38,314	46,701
Dross and skimmings	107	80	98
Old and worn out	...	14	...

U. S. Zinc Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	Sept.	Oct.	Nov.
Ore, conc. (cont.)	1	11	....
Slabs, blocks, etc.	9,110	4,827	7,768
Canada	2	3	....
Mexico	39	....	....
Brazil	302	141	726
Colombia	....	....	330
Belgium	3	....	2
Germany (West)	....	3	1,120
Netherlands	168	....	450
Sweden	616	449	673
United Kingdom	327	2,987	2,913
Philippines	....	....	248
Japan	7,405	258	....
Korea	....	75	....
India	192	611	1,046
Other countries	56	300	260*
Total Exports:			
Ore, conc., slabs	9,111	4,838	7,768
Scrap, ashes, dross and skimmings	1,426	412	2,052
Battery shells and parts, unassembled	....	....	2
Rolled in sheets, plates & strips & die castings	238	308	267
Zinc and zinc alloys in crude and semifabricated forms	146	161	157
Zinc oxide	202	113	115

* Includes 220 tons to Surinam.

U. S. Lead Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	Sept.	Oct.	Nov.
Lead, ore concentrates, matte and base bullion (content)	1,114	7	....
Mexico	14	7	....
Other countries	1,100	....	....
Pigs and bars	56	482	31
Canada	1	....	....
Mexico	32	3	....
Cuba	7	....	....
Colombia	3	....	2
Peru	1	1	....
Philippines	....	7	4
Taiwan	....	450	....
Other countries	12	21	25
Total Exports:			
Ore, base bullion, ref...	1,170	489	31
Scrap	355	827	114
Lead plate, including battery plate, not assembled as complete battery units	33	3	2
Babbitt metal	6	8	9
Lead and lead base alloys in semifabricated forms	37	28	32

World Production of Copper

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Canada (b)	Mexico (crude) (c)	Chile (d)	Peru (d)	Fed. Rep. of Germany (e)	Norway (f)	United Kingdom (g-h)	Yugoslavia (e)	India (f-h)	Japan (e)	Turkey (f)	Australia (e)	Northern Rhodesia (e)	Union of South Africa (d)
1955															
Total	1,036,702	326,599	61,583	447,288	35,478	286,805	14,876	138,271	31,151	8,432	124,908	26,313	41,935	350,302	47,176
1956															
Total	1,133,134	356,251	69,918	506,251	35,005	279,461	16,467	127,365	32,390	8,827	139,062	27,101	55,711	435,186	47,914
1957															
Total	1,115,483	360,745	42,905	....	46,141	255,710	17,265	121,799	37,186	9,298	143,654	27,101	55,633	499,418	47,828
1958															
Total	1,881,170	346,816	68,386	462,064	42,750	295,312	19,529	106,134	37,116	9,062	136,612	24,676	72,361	426,513	53,090
1959															
June	99,419	36,979	5,847	46,901	3,357	24,635	1,743	10,909	3,231	776	18,621	2,362	8,133	53,895	4,766
July	81,662	36,067	5,755	45,508	3,676	25,890	1,639	7,108	3,369	781	18,957	1,846	5,346	48,806	4,541
Aug.	51,327	35,045	5,326	50,093	2,533	24,716	1,677	6,610	1,810	774	18,805	2,378	5,798	50,285	4,357
Sept.	19,503	35,740	4,125	44,439	8,782	25,357	1,986	10,438	3,619	799	18,837	2,427	7,111	48,753	3,742
Oct.	20,931	35,980	4,068	36,449	3,061	27,840	1,800	8,951	3,137	804	18,898	2,304	....	49,519	3,025
Nov.	18,351	35,271	4,886	50,877	2,904	25,258	1,495	10,076	3,451	802	17,186	2,923	....	49,232	5,005
Dec.	26,686	34,416	4,872	53,186	3,438	28,143	2,035	8,736	2,403	421	20,498	....	....	48,350	5,244
1960															
Jan.	64,098	36,404	4,326	47,550	2,901	27,222	1,941	7,489	3,310	769	21,096	....	4,702	56,495	5,061
Feb.	85,899	35,824	4,817	43,380	3,579	25,288	1,954	8,719	3,013	831	....	....	6,915	47,322	3,917
Mar.	107,895	38,341	5,376	49,124	15,956	30,836	2,008	8,453	3,617	913	22,968	2,723	6,310	52,332	4,292
Apr.	104,895	34,289	4,672	50,010	16,501	26,915	1,905	9,640	3,177	808	21,563	2,480	....	54,595	4,738
May	104,272	36,892	4,300	39,580	16,198	29,897	2,038	12,379	3,375	838	18,077	....	....	55,596	4,706
June	95,522	37,016	5,061	43,826	13,259	28,011	1,877	11,720	2,982	820	23,314	1,550	7,149	54,616	4,494
July	91,238	38,452	4,515	50,251	14,544	27,869	1,822	7,844	3,935	878	23,498	3,480	8,060	54,982	4,327
Aug.	84,579	37,996	4,737	49,342	12,544	29,921	1,858	10,165	3,007	856	23,395	2,896	6,029	56,053	4,421
Sept.	96,503	34,555	4,373	52,387	18,453	27,529	2,016	14,514	3,314	848	23,554	....	....	50,937	4,369
Oct.	102,034	36,182	4,999	31,647	20,377	30,563	....	10,156	....	887	25,134	....	....	52,344	....
Nov.	100,884	....	4,737	....	19,984	....	....	....	....	....	24,872	....	....	50,299	....

(a) Reported by Copper Institute. Crude, "recoverable contents of mine production or smelter production or shipments, and custom intake." Does not include intake of scrap nor of imported ore except that received from Cuba and Philippines. (b) Blister copper plus recoverable copper in concentrates, matte, etc., exported. (c) Crude copper, i. e., copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e. g., in Rhodesia. (d) Blister and/or refined. (e) Refined. There are quantities of scrap included in the electrolytic production in addition to that reported, tonnage of which is not obtainable. (f) Smelter production. (g) Refinery production from imported blister only. (h) British Bureau of Non-Ferrous Metal Statistics. * Refined.

World Production of Refined Lead

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States	Canada	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Yugoslavia	Japan	Australia (a)	French Morocco	Tunisia	Rhodesia	Total
1955																
Total	547,153	148,811	221,138	67,303	91,241	73,251	162,508	46,806	67,509	83,347	40,912	254,558	28,870	28,620	17,976	1,893,125
1956																
Total	613,293	147,865	213,524	61,917	111,479	73,251	178,713	42,780	64,824	83,507	51,019	256,300	30,993	26,623	17,024	1,984,344
1957																
Total	604,533	142,935	218,266	55,971	....	94,509	195,136	42,336	61,332	85,313	59,670	261,035	34,442	27,069	12,364	2,041,530
1958																
Total	575,612	130,886	246,443	80,999	119,192	111,337	223,973	60,860	77,490	92,903	52,915	271,654	42,266	32,359	16,492	1,955,753
1959																
June	37,459	12,997	20,000	6,540	9,125	6,976	18,128	2,453	6,510	7,854	6,349	25,151	1,552	926	1,344	164,815
July	32,882	8,096	17,099	6,401	8,734	6,065	16,381	4,384	6,074	2,221	5,303	19,125	2,859	1,749	1,344	139,291
Aug.	25,589	7,357	19,086	4,267	7,547	6,581	15,256	3,354	6,049	8,645	5,344	21,168	862	2,863	1,344	136,725
Sept.	14,801	9,775	14,320	4,354	7,217	6,164	17,773	4,502	4,728	8,731	5,322	22,786	3,567	2,352	1,344	128,850
Oct.	18,892	9,897	17,988	6,093	7,107	6,004	18,070	4,310	6,193	....	4,663	24,226	3,466	2,669	1,344	.....
Nov.	18,796	9,674	18,223	6,199	7,766	6,431	17,820	4,310	6,193	8,273	4,594	24 226	3,466	2,669	1,344	141,370
Dec.	30,160	10,071	16,448	5,826	7,708	6,581	19,726	4,638	6,639	11,393	6,865	23,445	3,869	2,056	1,344	.....
1960																
Jan.	40,043	11,664	15,821	6,127	8,450	6,818	19,424	3,128	7,284	6,896	6,699	26,233	2,448	....	1,309	163,457
Feb.	36,435	12,459	17,371	6,063	8,746	6,276	17,907	4,260	6,468	7,167	....	24,964	2,267	1,047	1,316	.....
Mar.	37,192	13,967	13,687	7,154	9,561	8,500	19,743	3,716	6,249	7,804	7,034	19,307	2,916	1,774	1,348	161,625
Apr.	40,177	13,261	17,715	6,945	9,357	9,716	19,202	3,607	6,886	6,382	6,607	19,663	3,053	2,663	1,347	168,049
May	36,509	13,467	18,736	6,905	9,406	9,370	20,299	4,074	....	6,865	6,086	22,065	3,103	1,241	1,354	.....
June	33,448	13,017	14,320	6,695	8,247	8,343	16,372	3,387	4,870	8,503	6,763	19,649	2,423	1,813	1,355	150,774
July	29,270	11,494	15,523	7,000	6,897	8,818	17,036	4,029	4,624	9,125	7,221	23,530	3,835	2,922	1,409	153,276
Aug.	32,623	13,218	16,639	6,008	5,915	2,205	18,794	3,425	7,317	8,067	6,666	22,249	1,463	837	1,344	148,272
Sept.	29,638	12,797	14,722	6,384	6,394	9,048	18,758	3,837	7,109	10,448	6,526	....	2,148	2,215	1,393	.....
Oct.	33,336	....	14,236	6,890	....	11,393	19,655	4,485	7,158	....	7,193	....	4,511	2,245	1,376	.....
Nov.	38,387	....	15,305	7,934	....	....	....	....	....	....	6,709	....	3,029	1,962	1,351	.....

(a) Production credited to Australia includes lead refined in England from Australian base bullion.

World Production of Slab Zinc

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Can. (b)	Mexico	Peru (b-c)	Belgium	France (a)	Fed. Rep. of Germany	Great Britain	Italy	Netherlands	Norway (b)	Spain	Yugoslavia	Japan (a)	Australia (b)	Rhodesia (b)	Total (d)
1955																	
Total	1,031,018	257,008	61,879	18,943	233,623	123,623	197,024	90,917	77,761	31,202	49,724	26,244	15,175	122,965	113,221	31,248	2,534,457
1956																	
Total	1,062,954	255,601	62,136	10,428	251,906	124,105	204,961	90,784	80,407	32,123	53,170	25,224	15,434	153,821	117,445	32,396	2,630,383
1957																	
Total	1,574,500	247,356	62,354	35,772	259,701	148,455	202,627	85,348	81,179	32,786	52,787	24,279	30,256	152,145	123,587	33,040	2,691,699
1958																	
Total	892,607	254,661	18,354	34,685	257,540	177,422	210,408	80,494	5,955	2,841	54,423	26,750	34,446	166,883	128,548	39,508	2,464,639
1959																	
June	75,544	21,250	4,776	2,524	21,004	14,120	16,185	8,271	7,164	2,899	4,759	2,180	2,083	15,873	10,899	2,716	218,121
July	73,101	21,055	5,038	2,634	20,100	14,262	16,325	6,112	7,303	2,917	4,539	2,057	3,796	15,233	11,189	2,856	215,525
Aug.	69,768	21,588	4,965	2,504	19,472	14,138	16,585	6,507	7,370	2,968	4,646	2,198	3,355	15,308	11,298	2,912	211,964
Sept.	62,202	20,744	4,935	2,537	19,387	11,883	16,366	7,892	6,819	2,928	4,708	2,208	3,013	15,183	10,985	2,800	199,560
Oct.	63,938	21,744	5,084	2,545	20,512	13,228	17,064	5,657	6,403	2,967	3,570	2,245	....	....	10,904	2,800	.....
Nov.	62,346	21,039	5,072	2,608	21,180	12,251	16,689	6,203	6,403	2,967	3,570	2,245	4,990	13,634	10,904	2,800	199,319
Dec.	69,666	21,963	5,330	2,578	21,810	12,807	17,336	7,772	6,519	3,201	3,074	2,331	....	15,141	11,305	2,906	.....
1960																	
Jan.	73,326	22,426	5,278	2,608	21,957	12,675	17,409	7,250	6,781	2,786	4,743	2,402	3,178	15,498	11,023	2,707	220,587
Feb.	74,738	21,055	4,627	2,660	22,059	13,331	16,501	5,761	6,774	2,957	4,299	2,213	3,180	....	10,357	2,664	.....
Mar.	86,028	22,549	5,297	2,841	22,406	14,424	17,663	7,868	7,794	3,462	4,388	2,242	3,392	16,307	11,137	2,894	.....
Apr.	83,221	21,391	4,662	2,760	22,608	14,235	16,883	6,860	7,173	3,112	4,421	2,146	3,100	16,188	10,874	2,800	.....
May	79,216	21,701	4,972	3,051	23,278	14,071	17,147	5,137	8,038	3,361	3,638	....	3,190	12,088	11,238	2,897	.....
June	76,723	21,294	4,554	2,951	23,024	13,837	15,984	6,786	7,507	3,454	3,988	2,174	3,211	16,654	10,288	2,803	.....
July	73,754	20,860	5,080	3,068	23,094	14,148	16,892	6,574	7,629	3,390	2,390	2,264	3,250	17,244	11,760	2,803	.....
Aug.	63,840	21,203	4,983	3,140	22,845	13,427	16,679	5,569	7,777	3,319	3,815	2,356	3,265	17,417	11,610	2,821	.....
Sept.	60,004	21,633	4,662	2,897	22,731	11,501	15,882	7,187	7,381	....	4,502	2,133	3,452	17,449	11,171	2,745	.....
Oct.	63,005	22,628	4,771	3,150	22,955	14,200	16,539	5,870	7,101	....	4,536	1,906	....	....	11,715	2,816	.....
Nov.	60,841	....	4,807	2,977	....	12,527	....	8,053	....	....	4,551	....	....	18,012	....	2,580	.....

(a) Partially electrolytic. (b) Entirely electrolytic. (c) Beginning 1954 both electrolytic and electrochemic. (d) The above totals omit production in Russia, Czechoslovakia, Poland and in Argentina.

U. K. Stocks of Zinc

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

At start of:	Virgin Zinc 1959	Virgin Zinc 1960	Zinc Conc. 1959	Zinc Conc. 1960
Jan.	34,166	37,162	56,371	45,885
Feb.	34,805	48,337	58,518	41,547
Mar.	36,850	48,689	57,897	39,546
Apr.	38,457	51,064	52,151	44,250
May	38,643	54,491	47,936	47,486
June	37,713	52,470	41,954	47,595
July	38,297	52,004	45,640	54,044
Aug.	37,427	55,362	43,948	58,587
Sept.	40,358	53,583	42,385	63,312
Oct.	40,995	52,717	39,233	63,092
Nov.	35,994	49,817	38,948	62,497
Dec.	35,460	....	47,131	....

U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

(Gross Weight)	1960 Sept.	1960 Oct.	1960 Nov.
Zinc ore and concentrates	14,364	11,877	9,516
Zinc con.*	7,434	5,577	†
Australia	3,211	3,211	...
Peru	597	587	...
Burma	1,324	812	...
Other countries	2,302	967	...
Zinc and zinc alloys	14,036	12,351	18,662
Australia	...	601	...
Canada	5,948	5,922	8,564
Belgium	1,446	1,305	3,036
Germany (W.)	1	...	...
Netherlands	100	20	800
Soviet Union	705	1,561	2,050
United States	3,437	1,542	2,162
Belgian Congo	1,450	600	550
Poland	100	200	450
Other countries	849	600	1,050

* British Bureau of Non-Ferrous Metal Statistics. The estimated zinc content is not the content of the gross weight as officially reported for any comparable period.

† Not available.

U. K. Copper Exports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1960 Sept.	1960 Oct.	1960 Nov.
Copper unwrought —ingots, blocks, slabs, bars, etc.	4,611	3,090	4,622
Plates, sheets, rods, etc.	2,128	4,162	8,265
Wire (including uninsulated electric wire)	194	293	271
Tubes	827	894	1,161
Other copper, worked (including pipe fittings)	126	104	143
Total	7,886	8,543	14,462

Copper Consumption in United Kingdom

British Bureau of Non-Ferrous Metal Statistics

(In tons of 2,240 pounds)

	Unalloyed	Alloyed*	Total	Virgin	Scrap
1956 Total	388,167	251,312	639,479	500,794	138,685
1957 Total	407,326	234,158	641,484	507,493	133,991
1958 Total	442,977	225,007	667,978	534,619	133,359
1959					
July	24,714	19,858	44,572	32,034	12,538
August	24,524	16,097	40,621	30,866	9,735
September	35,447	21,920	57,367	45,178	12,189
October	37,221	23,880	61,101	47,345	13,756
November	37,463	23,392	60,855	47,031	13,824
December	36,044	23,202	59,246	44,753	14,493
Total	382,295	250,871	633,166	478,819	154,347
1960					
January	33,888	23,428	57,316	41,741	15,575
February	37,662	23,925	61,587	48,824	12,763
March	41,306	26,676	67,982	54,389	13,593
April	35,153	23,525	58,678	41,147	17,531
May	38,621	25,038	63,659	46,406	17,253
June	40,612	24,786	65,398	54,830	10,568
July	26,294	20,012	46,306	33,294	13,012
August	28,775	20,325	49,100	38,055	11,045
September	39,977	25,771	65,748	48,621	17,127
October	37,756	24,616	62,372	47,498	14,874

* Includes copper sulphate effective October, 1954.

U. K. Virgin Copper Stocks

(In long tons)

(British Bureau of Non-Ferrous Metal Statistics)

At start of.	1958	1959	1960
Jan.	91,477	64,184	55,005
Feb.	82,483	65,941	61,008
Mar.	89,147	65,875	55,979
Apr.	94,330	72,946	51,137
May	88,582	72,318	59,404
June	88,913	78,505	77,808
July	81,851	80,477	71,391
Aug.	84,756	81,986	98,083
Sept.	89,899	89,483	110,594
Oct.	85,092	77,803	110,300
Nov.	74,696	64,602	118,033
Dec.	69,023	60,936	....

U. K. Refined Lead Stocks

(British Bureau of Non-Ferrous Metal Statistics)

(In long tons)

At start of.	1958	1959	1960
Jan.	51,296	45,444	48,035
Feb.	49,134	48,102	44,290
Mar.	47,738	40,535	42,043
Apr.	40,547	53,289	41,248
May	37,509	62,286	50,363
June	34,608	63,135	45,657
July	40,518	57,810	46,542
Aug.	37,148	67,586	53,069
Sept.	43,758	66,048	59,595
Oct.	48,856	63,121	58,157
Nov.	40,216	56,697	60,218
Dec.	35,335	46,984	....

Zinc Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

	1960 Aug.	1960 Sept.	1960 Oct.
IMPORTS			
U. S. (s.t.)	8,134	17,272	7,923
Canada (s.t.)	6	..	...
Belgium	354	381	...
Denmark	939	1,763	545
France	1,412	938	1,078
Germany, W.*	14,138	11,461	...
Italy	1,200	...	...
Netherlands	996	799	1,564
Sweden	2,008	4,006	...
Switzerland*	1,029	2,135	2,703
U. K. (l.t.)	11,410	14,036	12,351
India‡ (l.t.)	7,424	5,300	...
EXPORTS			
U. S. (s.t.)	7,601	9,110	4,827
Canada (s.t.)	15,730	14,310	29,677
Belgium	10,361	10,900	...
Denmark	184	652	196
France	532	564	709
Germany, W.*	1,727	3,146	...
Italy	1,140	...	...
Netherlands	1,673	1,087	2,076
Norway	2,359	...	...
Switzerland*	22	11	...
U. K.† (l.t.)	577	1,516	419
N. Rhodesia‡ l.t.	2,516	2,551	2,425
Australia (l.t.)	2,967	...	...

* Includes scrap.

† Includes manufactures.

‡ British Bureau of Non-Ferrous Metal Statistics.

United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

	Tin Content of Tin in Ore: Imports	Production*	Stock at end of period*	Tin Metal: Imports	Production*	Consumption	Exports & Re-exports	Stock at end of period
1957 Total	39,272	1,028	....	9,834	34,175	20,365	7,362	71,931
1958 Total	27,419	1,090	....	13,195	32,551	20,413	20,398	19,054
1959								
September	2,990	115	2,132	33	2,229	2,093	3,742	10,624
October	2,259	108	1,851	24	3,101	1,915	1,986	10,383
November	3,936	90	3,317	25	2,513	1,861	1,997	10,545
December	2,161	117	2,941	15	2,858	1,997	1,513	11,523
Total	**25,812**	**1,252**	....	**726**	**27,229**	**21,396**	**21,358**	**10,884**
1960								
January	**1,490**	**117**	**1,845**	**190**	**2,877**	**1,878**	**1,394**	**10,884**
February	2,417	105	2,095	421	2,144	1,879	1,189	10,240
March	2,294	98	2,316	10	2,743	2,191	1,099	10,677
April	1,532	90	2,216	159	1,645	1,774	231	10,349
May	1,785	21	1,496	661	2,429	1,902	723	10,565
June	2,255	21	1,345	25	2,828	2,133	515	11,113
July	1,840	18	1,202	476	1,894	1,638	241	11,797
August	2,419	18	1,345	331	1,907	1,696	693	11,771

*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks.

Canada's Copper Output

(Dominion Bureau of Statistics)

(Primary Copper)

(In Tons)

	1957	1958	1959	1960
Jan.	25,469	32,868	24,664	36,404
Feb.	21,861	28,668	28,016	35,824
Mar.	27,663	29,239	32,427	38,904
Apr.	27,398	30,635	32,130	34,967
May	29,086	32,471	32,622	37,561
June	24,093	32,418	36,979	37,645
July	27,195	31,131	36,067	38,452
Aug.	26,943	30,867	35,045	37,996
Sept.	24,633	27,546	35,740	34,555
Oct.	30,312	22,572	35,980	36,182
Nov.	27,331	20,368	35,271	...
Dec.	31,604	19,033	34,416	...
Year	323,583	346,816	399,362	

Canada's Copper Exports

(Dominion Bureau of Statistics)

(Ingots, bars, slabs and billets)

(In Tons)

	1957	1958	1959	1960
Jan.	20,582	26,883	10,620	29,046
Feb.	16,272	16,816	10,304	22,295
Mar.	14,270	18,662	11,025	20,338
Apr.	16,417	23,261	17,079	21,135
May	19,048	19,358	21,739	20,767
June	10,826	20,831	21,310	24,832
July	18,621	21,703	13,650	22,242
Aug.	21,980	15,881	15,155	30,357
Sept.	14,314	15,373	21,077	19,253
Oct.	13,110	20,341	19,977	19,918
Nov.	16,622	14,391	23,172	....
Dec.	16,282	11,138	20,542	....
Year	198,794	224,638	198,010	....

Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)*

(In Tons)

	1957	1958	1959	1960
Jan.	14,032	17,117	17,118	16,284
Feb.	15,170	14,908	15,923	16,397
Mar.	16,940	15,421	17,389	16,887
Apr.	14,275	15,644	16,237	16,266
May	14,591	15,131	16,813	16,558
June	16,431	15,645	14,968	17,534
July	14,377	14,076	15,111	18,039
Aug.	14,679	12,260	14,104	16,800
Sept.	15,869	15,401	12,420	16,759
Oct.	14,151	14,564	13,958	15,983
Nov.	15,879	16,680	13,024	....
Dec.	15,296	18,248	14,545	....
Year	171,690	185,095	181,610	....

* New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

Canada's Lead Exports

(Dominion Bureau of Statistics)

(In Pigs)

(In Tons)

	1957	1958	1959	1960
Jan.	8,946	4,752	5,034	5,549
Feb.	6,633	1,553	6,377	6,692
Mar.	7,044	9,497	11,831	11,216
Apr.	7,314	7,450	7,836	5,407
May	9,676	7,764	12,230	6,979
June	7,210	4,036	15,610	9,521
July	4,682	12,629	3,478	7,955
Aug.	6,416	7,232	4,023	9,080
Sept.	8,467	5,125	3,895	1,802
Oct.	7,761	10,320	4,885	14,387
Nov.	6,175	10,641	6,785	....
Dec.	4,217	11,352	10,218	....
Year	84,541	92,351	92,252	....

Canada's Zinc Output

(Dominion Bureau of Statistics)

(Refined Zinc)

(In Tons)

	1957	1958	1959	1960
Jan.	20,340	21,801	21,456	22,247
Feb.	19,808	19,743	19,709	21,055
Mar.	21,941	22,314	22,135	22,549
Apr.	20,504	20,986	21,512	21,391
May	20,564	21,269	21,147	21,701
June	19,928	20,353	21,250	21,294
July	20,061	20,873	21,055	20,860
Aug.	20,305	21,152	21,588	21,203
Sept.	20,247	20,530	20,744	21,633
Oct.	20,892	21,125	21,744	22,627
Nov.	20,933	20,273	21,039	....
Dec.	21,823	21,705	21,963	....
Year	247,351	252,157	255,342	....

Canada's Zinc Exports

(Dominion Bureau of Statistics)

(Ore in Tons)

	1957	1958	1959	1960
Jan.	19,304	17,349	13,565	18,445
Feb.	16,618	8,376	12,675	12,995
Mar.	14,923	19,636	14,617	14,055
Apr.	17,131	16,346	12,789	13,344
May	16,680	15,121	11,049	12,460
June	16,157	7,776	20,298	10,113
July	12,912	27,394	23,122	18,540
Aug.	20,520	15,906	18,464	23,076
Sept.	17,671	8,670	14,367	10,122
Oct.	16,735	22,810	12,518	18,382
Nov.	17,225	17,978	16,577	....
Dec.	16,131	18,344	11,043	....
Year	202,007	195,707	181,084	....

Canada's Silver Exports

(Dominion Bureau of Statistics)

(In ores and concentrates)

Fine Ounces)

	1958	1959	1960
Jan.	634,715	185,367	887,242
Feb.	208,149	329,742	1,312,006
Mar.	350,827	425,973	740,465
Apr.	284,971	989,593	809,500
May	376,082	564,017	491,805
June	438,253	871,570	545,610
July	529,770	728,598	752,373
Aug.	279,511	688,042	911,124
Sept.	583,570	763,017	445,091
Oct.	323,475	767,939	659,646
Nov.	217,892	70,205	.....
Dec.	871,573	430,802	.....
Year	5,098,788	6,210,175	.....

Canada's Silver Output

(Dominion Bureau of Statistics)

(In Ounces)

	1958	1959	1960
Jan.	2,529,583	3,094,440	2,755,069
Feb.	2,294,655	2,264,903	2,864,074
Mar.	2,448,698	2,782,307	2,739,583
Apr.	2,558,958	2,691,503	2,588,829
May	2,650,665	2,499,149	2,354,657
June	2,527,632	2,676,937	2,971,473
July	2,385,687	2,867,957	2,919,664
Aug.	2,884,154	2,519,033	2,650,110
Sept.	2,856,304	2,446,846	2,468,268
Oct.	2,390,027	3,072,219	2,878,221
Nov.	2,643,790	2,333,137	.....
Dec.	2,917,528	2,678,623	.....
Year	31,087,681	31,927,054	.....

Canada's Nickel Output

(Dominion Bureau of Statistics)

(In Tons)

	1957	1958	1959	1960
Jan.	16,609	16,710	8,047	17,399
Feb.	15,027	15,896	12,616	16,435
Mar.	16,733	15,853	14,922	17,780
Apr.	15,347	15,163	15,493	17,524
May	16,225	15,231	16,622	17,207
June	15,447	14,603	16,599	18,382
July	15,878	12,851	16,199	17,821
Aug.	16,756	12,597	16,784	19,142
Sept.	15,604	11,786	16,205	18,185
Oct.	15,628	3,682	17,212	18,005
Nov.	14,587	3,178	16,904	...
Dec.	15,096	3,298	18,738	...
Year	188,962	140,842	186,341	

Canadian Copper Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1960		
	Sept.	Oct.	Nov.
Ore, matte, regulus, etc. (content)	9,014	4,246	1,358
United States	957	1,591	186
Belgium	...	158	...
Germany (W.)	...	158	...
Norway	1,186	1,446	1,023
U. Kingdom	153	71	149
Japan	6,718	822	...
Ingots, bars, billets, anodes	19 253	19,918	22,608
United States	7,617	6,599	6,466
Brazil	...	...	18
Belgium	780	275	609
France	331	846	723
Finland	112	...	224
Germany (W.)	392	1,932	1,400
Italy	112	196	908
Netherlands	896	336	112
Portugal	56	112	56
Sweden	...	...	672
Switzerland	56	56	394
U. Kingdom	5,852	7,987	9,282
Australia	560	560	224
India	1,109	318	844
Japan	1,380	701	500
Other countries	...	...	176
Total Exports:			
Crude & refined	28,267	24,164	23,966
Old and scrap	832	997	1,067
Rods, strips, sheet & tubing	1,987	1,002	2,468

Canadian Zinc Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1960		
	Sept.	Oct.	Nov.
Ore (zinc content)	10,121	18,382	12,538
United States	10,121	11,109	9,688
Belgium	...	2,074	...
France	...	2,036	...
Germany (W.)	...	2,169	2,850
Netherlands	...	994	...
Slab zinc	14,310	29,677	15,930
United States	10,932	4,594	6,643
Brazil	...	110	...
Belgium	...	112	...
Netherlands	...	700	280
U. Kingdom	2,470	16,312	6,521
Korea	...	1,347	218
Hong Kong	...	50	...
Philippines	..	550	...
Taiwan	...	...	55
India	80	3,303	1,723
Pakistan	...	64	...
Japan	772	2,535	378
Other countries	56	...	112
Total Exports:			
Ore and slabs	24,431	48,059	28,468
Zinc scrap, dross, ashes	297	490	1,030
United States	109	72	98
Belgium	...	...	550
Germany (W.)	...	109	193
Netherlands	...	...	119
U. Kingdom	173	164	22
Japan	15	145	48

Canadian Lead Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1960		
	Sept.	Oct.	Nov.
Ore (lead content)	1,485	9,581	723
United States	1,485	1,682	723
Belgium	...	3,948	...
Germany (W.)	...	3,951	...
Refined laed	1,801	14,387	10,063
United States	20	2,330	3,190
Uruguay	...	...	55
Netherlnads	...	...	448
U. Kingdom	896	9,179	4,464
Japan	787	2,671	1,666
Taiwan	...	66	55
Thailand	46	...	...
India	...	118	185
Other countries	52	23	...
Total Exports:			
Ore & refined	3,286	23,968	10,786
Pipe and tubing	...	...	2
Lead scrap	82	959	585

Copper Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in ingots, slabs, etc.; metric tons except where otherwise noted.

	1960		
	Aug.	Sept.	Oct.
IMPORTS			
U. S. (blist., s.t.)	41,712	21,323	39,556
(ore, etc., s.t.)	4,036	7,105	1,919
(ref., s.t.)	8,975	7,675	6,607
Belgium*	26 304	16 076	...
Denmark	408	602	540
France (crude)	1,649	...	864
(refined)	21.582	20,952	17,204
Italy	14.274	...	...
Germany, W.	38,889	33,582	...
Netherlands	2.812	4,176	2,927
Norway	471	...	...
Sweden	6,826	6.338	...
Switzerland	3,360	3,564	...
U. K. (l.t.)	50,182	46,024	45,496
India (blister-/ refined,‡ l.t.)	7 435	5,005	...
EXPORTS			
U. S. (ore and unref., s.t.)	255	1,524	840
(refined, s.t.)	58,720	42,919	37,207
Canada (refined, s.t.)	30 356	19,253	19,918
Chile (blister and/or ref.)	46,518	47,959	23,596
Belgium*	14,635	10,913	...
Germany (W.)	5,570	7,452	...
Norway	1,286	...	...
Sweden	712	2.357	...
U. K. (l.t.)	4.424	4,611	3,090
Turkey*	1,750	...	...
N. Rhodesia (ref. & blist.,‡ l.t.)	43.846	37,756	50,566

* Includes alloys.
† Includes old.
‡ British Bureau of Non-Ferrous Metal Statistics.

Canada's Nickel Exports

(Dominion Bureau of Statistics)

(Refined, in oxidse, matte, etc.)
(In Tons)

	1957	1958	1959	1960
Jan.	14,260	14,233	6,757	21,443
Feb.	9,974	12.157	7,976	14,680
Mar.	14,958	12,316	14,006	19,072
Apr.	18 671	20,962	14 213	13,892
May	19,351	20,574	16 142	14,351
June	14,539	16,144	15,901	15,719
July	14,181	14,055	11,985	13,192
Aug.	14,966	13,012	13,664	21,493
Sept.	14,160	14,371	19,143	15,636
Oct.	13.370	8.335	.....	13,732
Nov.	16,620	3,001	.....	.....
Dec.	14,606	5,060	.....	.....
Year	178,656	154,220	.....	.....

French Zinc Imports

(A. B. M. S.)

(In metric tons)

	1960		
	Sept.	Oct.	Nov.
Ore (gross wieght)	20,810	27,642	21,325
Canada	...	3,070	280
Belgium	1,862	1,703	1,971
Finland	...	570	3,330
Greece	1,990	...	...
Italy	...	3,000	...
Norway	1,402	...	...
Spain	3,015	5,099	...
Algeria	7,707	6,319	7,386
Morocco	4,834	3,170	5,358
Tunisia	...	2,153	...
Belgian Congo	...	2,558	3,000
Slabs, bars, blocks, etc.	938	1,078	2,077
Peru	...	50	...
Belgium	785	498	1,857
Germany (W.)	20	20	20
Norway	33	...	...
Russia	...	510	...
Spain	100	...	200

French Copper Imports

(A. B. M. S.)
(In metric tons)

	1960		
	Sept.	Oct.	Nov.
Crude copper for refining blister, black and cement)	...	864	...
Belg. Congo	..	813	...
Rhodesia & Nyasaland	...	51	...
Refined	20,952	17,204	16,503
United States	9,794	3,989	4,333
Canada	1,479	754	1,525
Chile	983	851	189
Belgium	4,397	8,967	4,972
Germany (W.)	133	182	285
Sweden	3	279	40
U. K.	21	4	51
Belg. Congo	2,621	400	2,417
Rhodesia-Nyasaland	1,503	1,778	2,718
Other countries	18	...	...

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1960		
	Sept.	Oct.	Nov.
(Gross Weight)			
Copper and copper alloys	46,024	45,496	44,751
U. of S. Africa	16	...	750
Rhodesia-Nyasaland	18,657	20,196	21,342
Canada	8,048	9,535	8,218
Belgium	301	2	1
Germany (W.)	155	776	34
Norway	201	50	50
United States	6,601	5,175	5,479
Chile	11,575	7,806	7,156
Peru	100	249	370
Belgian Congo	...	298	...
Other countries	325	1,409	1,351
Of which:			
Electrolytic	31,162	32,436	29,867
Other refined	4,583	2,475	3,050
Blister or wrought	9,773	10,294	10,921
Wrought and alloys	506	291	913
Total	46,024	45,496	44,751

Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL
(Bureau of Census — Thousands of Pounds)

	Aluminum	Copper	Magnesium	Zinc	Lead Die
1954 Total	607,764	834,557	25,572	474,741	18,396
1955 Total	833,058	1,011,748	27,892	781,254	21,045
1956 Total	801,136	966,473	36,168	88,069	20,734
1957 Total	751,856	875,389	30,322	663,330	23,791
1958 Total	596,816	739,915	27,228	508,297	18,920
1959					
June	66,471	79,730	2,484	56,128	2,007
July	56,911	67,073	2,265	46,756	1,858
August	55,904	68,979	2,243	46,566	1,898
September	66,193	76,045	2,263	58,144	2,218
October	67,499	79,832	2,436	59,214	2,068
November	54,557	70,674	2,023	46,270	1,755
December	64,939	73,558	2,163	60,652	1,346
Total	790,520	892,027	27,144	651,437	21,658
1960					
January	68,247	73,971	2,135	61,357	1,496
February	71,699	71,797	2,075	62,925	1,628
March	72,216	75,908	1,903	60,816	1,994
April	61,797	66,777	1,926	47,553	2,030
May	60,330	66,299	1,953	50,844	1,935
June	60,068	64,585	2,050	50,809	2,009
July	45,694	48,399	1,638	35,117	1,488
August	58,848	63,765	2,025	45,101	1,689
September	62,116	61,362	2,146	52,514	1,806
October	63,684	59,853	2,038	56,201	1,760

Copper Castings Shipments

BY TYPE OF CASTING
(Bureau of Census) (Thousands of Pounds)

	Total	Sand	Permanent Mold	Die	All Other
1952 Total	1,009,910	910,862	63,865	8,259	26,924
1953 Total	990,496	888,369	61,316	10,077	30,734
1954 Total	834,557	751,804	48,849	6,480	27,394
1955 Total	1,011,748	907,852	63,041	8,541	31,408
1956 Total	966,113	866,404	57,522	10,023	32,134
1957 Total	875,389	789,819	44,746	10,776	30,048
1958 Total	739,985	667,255	36,529	10,201	22,681
1959					
March	78,641	69,472	4,333	1,361	3,475
April	82,799	73,567	4,640	1,328	3,264
May	78,413	69,351	4,363	1,291	3,408
June	79,730	70,836	4,421	1,175	3,298
July	69,073	61,650	3,869	946	2,608
August	68,979	60,346	4,410	993	3,230
September	76,045	66,517	4,810	1,138	3,580
October	79,832	69,583	5,172	1,169	3,908
November	70,674	61,490	4,893	1,160	3,131
December	73,558	64,579	4,337	1,130	3,512
Total	891,216	790,290	52,377	14,083	36,907
1960					
January	73,971	65,742	3,915	1,371	2,943
February	71,797	63,105	4,146	1,282	3,266
March	75,908	66,517	4,346	1,381	3,664
April	66,777	58,453	4,523	1,162	2,639
May	66,299	57,848	4,463	1,153	2,835
June	64,485	56,441	3,715	1,180	3,249
July	48,399	42,778	2,910	929	1,854
August	63,765	56,344	3,669	1,399	2,353
September	61,362	54,104	3,699	929	2,630
October	59,853	52,709	3,556	1,000	1,641

Nickel Averages

Electro, cathode sheets, 99.00%, f.o.b. refinery, duty included
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	74.00	74.00	74.00	74.00
Feb.	74.00	74.00	74.00	74.00
Mar.	74.00	74.00	74.00	74.00
Apr.	74.00	74.00	74.00	74.00
May	74.00	74.00	74.00	74.00
June	74.00	74.00	74.00	74.00
July	74.00	74.00	74.00	74.00
Aug.	74.00	74.00	74.00	74.00
Sept.	74.00	74.00	74.00	74.00
Oct.	74.00	74.00	74.00	74.00
Nov.	74.00	74.00	74.00	74.00
Dec.	74.00	74.00	74.00	74.00
Aver.	74.00	74.00	74.00	74.00

Platinum Averages

N. Y. MONTHLY QUOTATIONS
(Dollars per Troy Ounce)

	1957	1958	1959	1960
Jan.	101.92	77.85	52.57	80.00
Feb.	98.59	74.82	59.25	83.29
Mar.	93.50	72.096	77.10	83.00
Apr.	93.45	70.72	77.18	83.00
May	92.865	67.34	77.50	83.00
June	92.02	66.18	77.50	83.00
July	90.265	64.35	78.00	83.00
Aug.	84.426	60.94	78.00	83.00
Sept.	84.00	59.50	78.00	83.00
Oct.	84.00	57.327	78.00	83.00
Nov.	83.80	56.41	78.44	83.00
Dec.	78.70	53.154	78.50	83.00
Aver.	89.79	65.07	74.17	82.77

Spot Straits Tin

(Straits, Open Market, N. Y.)
Monthly Average Prices

	1957	1958	1959	1960
Jan.	101.511	92.94	99.411	99.863
Feb.	101.132	93.915	102.785	101.178
Mar.	99.643	94.452	103.042	100.228
Apr.	99.304	93.988	102.505	99.25
May	93.347	94.512	103.125	99.554
June	98.05	94.708	104.25	101.377
July	96.52	94.898	102.337	103.588
Aug.	94.261	94.988	102.333	102.864
Sept.	93.406	94.101	102.44	102.381
Oct.	91.838	96.523	102.238	103.469
Nov.	89.236	99.118	101.021	103.368
Dec.	92.35	98.989	99.176	101.661
Aver.	96.301	95.177	102.055	101.565

Prompt Tin Prices

(Straits, Open Market, N. Y.)
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	101.347	92.653	99.351	99.863
Feb.	100.257	93.763	102.708	100.987
Mar.	99.476	94.363	103.042	100.098
Apr.	99.288	92.988	102.505	99.25
May	98.335	94.512	103.107	99.548
June	98.025	94.619	104.142	101.318
July	96.44	94.892	102.337	103.525
Aug.	94.159	94.976	102.345	102.853
Sept.	93.313	94.054	102.435	102.256
Oct.	91.848	96.455	102.238	103.319
Nov.	89.236	98.985	100.972	102.855
Dec.	92.34	98.96	99.176	101.142
Aver.	93.672	95.069	102.03	101.251

Quicksilver Averages

N. Y. Monthly Averages
Virgin, Dollars per 76-lb Flask

	1957	1958	1959	1960
Jan.	256.00	224.35	219.50	211.30
Feb.	256.00	229.39	219.50	212.68
Mar.	256.00	232.096	223.57	214.00
Apr.	256.00	233.06	239.52	214.00
May	256.00	229.48	245.86	214.00
June	256.00	229.00	241.64	212.00
July	256.00	230.25	236.74	210.00
Aug.	252.20	240.27	232.524	209.74
Sept.	248.58	241.12	225.429	209.00
Oct.	234.48	235.94	224.548	209.00
Nov.	228.33	230.05	217.944	209.00
Dec.	226.50	223.54	215.05	209.00
Aver.	248.51	230.96	228.49	211.14

Primary Aluminum Output, Shipments and Stocks

(U. S. Department of Interior)

	Stocks beginning of month short tons	Production short tons	Sold or Used — Short tons	Sold or Used — Value f. o. b. plant	Stocks end of month short tons
1958 Total	....	1,565,556	1,595,067	.....	.....
1959					
July	88,612	179,194	187,387	91,635,864	80,419
August	80,419	172,816	159,206	77,711,678	94,029
September	94,029	168,206	153,170	74,809,052	109,065
October	109,065	173,742	151,683	73,293,070	131,124
November	131,124	153,665	152,024	74,247,828	132,765
December	132,765	162,996	184,123	89,712,146	111,638
Total	....	1,953,017	1,987,465	.....	.....
1960					
January	111,638	164,023	148,129	$73,424,794	127,352
February	127,532	156,825	167,215	83,087,192	117,142
March	117,142	170,688	172,846	88,761,065	114,984
April	114,984	168,596	144,469	73,561,622	139,111
May	139,111	175,863	166,403	85,418,807	148,571
June	148,571	171,356	149,917	76,925,639	170,010
July	170,010	177,564	143,948	73,173,364	203,626
August	203,626	172,973	164,883	84,495,902	211,716
September	211,716	162,882	148,724	76,221,049	225,874

Aluminum Wrought Products

PRODUCERS' MONTHLY NET SHIPMENTS

(Bureau of Census — Thousands of Pounds)

	Total	Sheet, Plate, Foil, Rod & Bar	Wire & Cable	Extruded Shapes & Tubing	Powder & Paste
1955 Total	2,805,500	1,542,368	365,391	812,311	35,854
1956 Total	2,870,101	1,577,601	398,602	782,398	28,017
1957 Total	2,677,423	1,396,502	399,040	789,430	28,187
1958 Total	2,624,911	1,441,385	285,355	821,249	25,742
1959					
July	373,060	211,850	39,902	111,661	4,708
August	247,833	126,512	29,411	85,380	2,537
September	262,749	140,313	25,843	89,986	2,419
October	287,081	154,669	27,614	97,478	2,697
November	247,260	136,516	20,528	83,594	2,304
December	268,155	152,007	24,210	84,504	2,606
Total	3,397,705	1,894,159	321,824	1,075,373	34,843
1960					
January	250,116	141,060	22,475	78,674	3,370
February	256,017	147,026	22,626	79,268	2,435
March	267,149	152,580	24,682	82,584	2,180
April	247,282	139,762	24,026	76,838	2,227
May	268,228	156,542	25,218	84,202	2,266
June	274,173	157,006	29,114	84,664	3,389
July	247,590	149,221	24,813	70,786	2,770
August	253,111	141,138	27,065	77,596	3,081
September	253,263	191,243	27,065	77,864	3,060
October	287,167	151,669	27,614	97,564	2,697

Aluminum Castings Shipments

(Bureau of Census)

BY TYPE OF CASTING

(Thousands of Pounds)

	Total	Sand	Permanent Mold	Die	All Other
1954 Total	609,066	155,738	213,968	232,726	6,800
1955 Total	833,058	171,757	298,115	354,804	8,282
1956 Total	801,036	171,763	245,421	376,108	7,736
1957 Total	751,656	144,121	232,326	369,086	...
1958 Total	596,790	117,421	186,949	292,599	...
1959					
July	56,911	11,581	20,410	24,786	...
August	55,904	11,130	17,824	26,818	...
September	66,193	12,309	21,506	32,239	...
October	67,499	12,958	21,781	32,640	...
November	54,557	10,813	16,326	27,303	...
December	64,939	12,409	19,902	32,523	...
Total	772,212	142,131	262,179	346,589	...
1960					
January	68,247	11,278	22,368	34,514	...
February	71,699	11,800	23,614	36,177	...
March	72,216	12,934	22,413	36,749	...
April	61,797	12,339	19,950	29,400	...
May	60,068	11,280	20,953	27,722	...
June	45,669	8,735	15,804	20,978	...
July	45,694	8,765	15,804	20,973	...
August	58,848	10,639	18,901	29,256	...
September	62,116	10,514	22,031	29,527	...
October	63,684	10,148	23,339	30,148	...

Virgin Aluminum*

Unalloyed Ingot (50-lb.), 99½% min., f.o.b.

Monthly Average Prices

(Cents Per Pound)

	1957	1958	1959	1960
Jan.	27.10	28.10	26.80	28.10
Feb.	27.10	28.10	26.80	28.10
Mar.	27.10	28.10	26.80	28.10
Apr.	27.10	26.10	26.80	28.10
May	27.10	26.10	26.80	28.10
June	27.10	26.10	26.80	28.10
July	27.10	26.10	26.80	28.10
Aug.	28.70	26.77	26.80	26.00
Sept.	28.10	26.80	26.80	26.00
Oct.	28.10	26.80	26.80	26.00
Nov.	28.10	26.80	26.80	26.00
Dec.	28.10	26.80	27.361	26.00
Aver.	27.517	26.889	26.847	27.225

* Price of 28.10c prior to Aug. 1, 1960, based on primary 30-lb. ingot, 99½% plus.

Magnesium Wrought Products Shipments

(Bureau of Census)

(Thousands of Pounds)

	1957	1958	1959	1960
Jan.	2,130	1,271	1,271	1,535
Feb.	2,522	1,280	1,691	1,724
Mar.	2,388	1,398	1,717	1,966
Apr.	2,511	1,479	2,089	1,790
May	2,230	1,443	1,644	1,989
June	1,881	1,709	1,946	1,742
July	1,428	1,227	1,681	1,526
Aug.	1,540	1,823	1,823	1,853
Sept.	1,501	1,807	1,807	2,125
Oct.	1,453	1,983	2,220	2,220
Nov.	1,230	1,662	1,320	....
Dec.	1,102	1,622	1,675	....
Total	21,915	18,702	20,884	....

Cadmium Averages

(Cents Per Pound)

N. Y. Monthly Averages

Cents per lb. in ton lots

	1957	1958	1959	1960
Jan.	170.00	155.00	145.00	148.50
Feb.	170.00	155.00	145.00	150.00
Mar.	170.00	155.00	145.00	150.00
Apr.	170.00	155.00	120.00	150.00
May	170.00	155.00	120.00	150.00
June	170.00	155.00	120.00	150.00
July	170.00	155.00	120.00	150.00
Aug.	170.00	155.00	120.00	150.00
Sept.	170.00	152.60	120.00	151.43
Oct.	170.00	145.00	*140.00	160.00
Nov.	170.00	145.00	140.00	160.00
Dec.	166.40	145.00	140.00	160.00
Aver.	169.70	152.30	132.00	152.494

* As of Oct. 1, 1959, for lots of up to one ton.

Steel Ingot Production

(American Iron and Steel Institute)

Period	Estimated Production — All Companies OPEN HEARTH Net tons	% of capacity	BESSEMER Net tons	% of capacity	ELECTRIC Net tons	% of capacity	TOTAL Net tons	% of capacity	Calculated weekly production, all companies (net tons)
1954 Total ..	80,327,494	73.6	2,548,104	53.2	5,436,054	52.0	88,311,652	71.0	1,693,741
1956 Total ..	102,840,585	91.6	3,227,997	67.4	9,147,567	81.2	115,216,149	89.8	2,203,828
1957 Total ..	10..65[illegible]6	87.0	2,475,138	54.9	8,582,062	71.3	112,714,996	84.5	2,161,776
1958									
Total	75,888,392	62.0	1,396,348	34.7	7,972,623	55.4	85,257,363	69.6	1,635,162
1959									
August	1,171,342	10.9	.....	...	267,935	23.4	1,439,277	11.5	324,893
[illegible]ember ...	[illegible]	12.9	.....	...	285,619	25.8	1,535,017	12.7	358,649
October	1,385,490	12.9	....	...	319,043	27.8	1,704,533	13.6	384,770
November ...	6,290,659	60.5	92,361	31.4	754,793	68.0	7,267,607	52.9	1,694,081
December ...	10,468,534	92.4	205,666	67.7	1,033,668	90.2	11,989,319	95.6	2,712,516
Total	81,663,997	64.5	1,380,283	38.6	8,532,514	63.2	93,446,132	63.3	1,792,216
1960									
January	10,510,616	97.7	211,132	73.2	1,046,675	85.6	12,049,404	95.5	2,719,956
February	9,713,527	94.0	216,263	80.2	949,588	83.0	11,126,806	94.3	2,687,634
March	10,103,122	93.9	202,812	70.3	952,008	77.9	11,564,683	91.6	2,610,538
April	8,603,306	82.7	105,336	37.7	766,452	64.8	9,777,857	80.1	2,279,221
May	7,844,140	72.9	73,010	25.3	603,817	49.4	8,830,472	70.0	1,993,335
June	6,439,000	61.9	80,000	28.7	560,000	47.3	7,394,000	60.6	1,724,000
July	5,494,331	51.1	61,700	21.4	505,890	41.4	6,350,924	50.3	1,436,861
August	5,860,394	54.5	52,652	18.3	645,404	52.8	6,838,000	54.2	1,543,567
September	5,525,244	53.1	42,228	15.1	603,626	51.0	6,458,421	52.9	1,508,977
October	5,917,780	55.0	56,914	19.7	623,236	51.0	6,868,380	54.4	1,550,424
November	5,308,894	51.0	51,246	18.4	554,514	46.9	6,171,940	50.5	1,438,681
December	5,046,000	46.9	36,000	12.5	552,000	45.1	5,836,000	46.3	1,320,000
Total	86,370,948	68.2	1,189,637	35.0	8,371,349	58.2	99,277,760	66.8	1,898,963

Blast Furnace Output

(American Iron and Steel Institute)

	net tons Pig Iron	Ferro-manganese & Spiegel	Total	% Capacity
1951				
Tl. Yr.	70,487,380	745,381	71,232,761	93.3
1952				
Tl. Yr.	61,528,668	629,926	62,158,591	84.2
1953				
Total ..	74,987,721	855,038	75,842,759	95.5
1954				
Total ..	58,119,882	568,735	58,688,117	71.6
1955				
Total ..	77,114,073	868,758	77,980,831	92.7
1956				
Total ..	75,301,134	664,341	75,965,475	88.9
1957				
Total ...	78,557,011	782,660	79,339,671	91.4
1958				
May ...	4,048,328	25,468	4,073,796	52.7
June ...	4,396,285	26,463	4,422,748	59.1
July ...	4,277,515	26,668	4,304,183	55.7
Aug.	4,799,955	31,374	4,831,329	62.1
Sept.	5,041,042	31,348	5,072,390	67.8
Oct.	5,835,995	36,963	5,872,958	76.0
Nov.	5,907,888	39,275	5,946,163	79.5
Dec.	6,025,385	47,505	6,072,890	78.6
Total ...	57,298,644	465,456	57,298,644	63.5
1959				
Jan.	6,260,395	48,572	6,211,823	77.9
Feb.	6,047,398	45,274	6,192,672	85.3
March ..	7,461,760	48,291	7,510,051	93.4
April ..	7,338,372	54,234	7,392,606	95.0
May	7,683,750	64,237	7,747,996	96.4
June	7,231,631	58,315	7,289,946	93.7
July	3,550,159	23,391	3,573,550	44.5
Aug.	.....	....	947,779	11.8
Sept.	.....	....	949,103	12.2
Oct.	.....	....	1,017,659	12.7
Nov.	4,199,101	20,172	4,219,273	54.2
Dec.	7,638,359	65,728	7,704,087	95.8
Total ...	60,322,426	452,313	60,774,738	...
1960				
Jan.	7,753,753	76,344	7,830,097	95.5
Feb.	7,342,469	71,533	7,414,002	...
March ..	7,713,696	79,715	7,793,411	93.1
April ...	6,770,229	69,864	6,830,093	86.1
May	6,030,992	63,419	6,394,411	78.0
June	5,261,171	48,316	5,309,487	66.9
July	4,480,144	43,353	4,523,497	55.2
Aug.	4,469,505	27,603	4,497,108	54.9
Sept.	4,125,379	17,763	4,125,379	52.0
Oct.	4,472,615	38,204	4,510,819	55.0
Nov.	4,138,356	36,509	4,174,865	52.6

Steel Castings Shipments

(Bureau of Census)

	(Short Tons) Total	For Sale	For Own Use
1951	2,101,604	1,507,413	594,191
1952	1,925,116	1,476,352	448,767
1953	1,829,277	1,290,016	431,330
1954	1,184,096	880,158	303,938
1955	1,530,694	1,166,706	363,988
1956	1,931,987	1,512,290	416,697
1957			
Total ..	1,766,191	1,261,301	406,444
1958			
Sept. ...	85,277	64,586	20,691
Oct. ...	95,389	73,367	22,022
Nov. ...	85,267	65,788	19,479
Dec. ...	103,800	81,360	22,440
Total ..	1,114,939	859,125	255,814
1959			
Jan. ...	105,392	82,693	22,709
Feb. ...	110,280	86,013	24,267
Mar. ...	131,317	103,848	27,469
Apr. ...	134,344	104,890	29,454
May ...	135,359	105,804	29,555
June ...	143,624	111,725	31,899
July ...	106,790	83,541	23,249
Aug. ...	98,014	79,188	18,826
Sept. ...	99,731	79,963	19,768
Oct. ...	105,570	84,850	20,720
Nov. ...	109,460	86,026	23,434
Dec. ...	103,800	81,360	23,440
Total ..	1,023,861	919,181	294,430
1960			
Jan. ...	122,565	94,052	28,513
Feb. ...	129,259	97,927	31,332
Mar. ...	143,708	109,688	34,020
Apr. ...	127,219	96,557	30,662
May ...	126,580	97,231	29,349
June ...	136,992	107,076	29,916
July ...	89,565	67,924	22,271
Aug. ...	101,709	77,146	24,563
Sept. ..	104,298	79,556	24,742
Oct. ...	102,664	79,622	23,042

Galvanized Sheet Shipments

(American Iron & Steel Institute)

(Net Tons)

	1957	1958	1959	1960
Jan.	235,902	186,649	279,244	323,073
Feb.	205,048	167,627	281,637	289,583
Mar.	206,886	195,885	311,961	329,395
Apr.	198,585	206,368	328,759	295,627
May	206,657	231,318	317,059	288,162
June	239,037	277,180	350,333	275,974
July	167 247	239,883	180 787	239,036
Aug.	186,790	253,263	N.A.	227,983
Sept.	183,952	258,723	N.A.	215,356
Oct.	212,886	290,157	N.A.	210,162
Nov.	190,380	253,909	196,644	198,244
Dec.	159,363	266,472	301,911	
Total	2,392,637	2,828,848	2,772,837	

N.A.—Not available.

SHIPMENTS OF TIN-TERNEPLATE

(American Iron & Steel Institute)

(Net Tons)

	—Hot Dipped— 1959	1960	—Electrolytic— 1959	1960
Jan.	30,304	32,525	417,210	493,828
Feb.	24,602	29,385	442,625	443,619
Mar.	46,705	38,131	597,408	538,166
Apr.	54,906	37,106	689,998	470,716
May	64,110	37,705	689,064	473,083
June	62,965	51,810	673,819	548,198
July	36,381	42,074	244,719	489,080
Aug.	N.A.	38,599	N.A.	472,209
Sept.	N.A.	28,610	N.A.	356,036
Oct.	N.A.	22,971	N.A.	206,944
Nov.	21,782	15,259	296,641	258,084
Dec.	31,487	....	464,080	....
Total	412,123	....	4,858,511	....

N.A.—Not available.

Steel Ingot and Castings Production and Index

(American Iron & Steel Institute)

Weekly Production Index of 100 Equals 1,862,933 Tons Based on average for 1957-1959.

Week Ending—1961		Net Tons	Index
Jan.	7	1,361,000	73.1
	14	1,482,000	79.6
	21	....	...
	28	....	...
Feb.	4	....	...
	11	....	...
	18	....	...
	25	....	...
Mar.	4	....	...
	11	....	...
	18	....	...
	25	....	...
April	1	....	...
	8	....	...
	15	....	...
	22	....	...
	29	....	...
May	6	....	...
	13	....	...
	20	....	...
	27	....	...
June	3	....	...
	10	....	...
	17	....	...
	24	....	...
July	1	....	...
	8	....	...
	15	....	...
	22	....	...
	29	....	...
Aug.	5	....	...
	12	....	...
	19	....	...
	26	....	...
Sept.	2	....	...
	9	....	...
	16	....	...
	23	....	...
	30	....	...
Oct.	7	....	...
	14	....	...
	21	....	...
	28	....	...
Nov.	4	....	...
	11	....	...
	18	....	...
	25	....	...
Dec.	2	....	...
	9	....	...
	16	....	...
	23	....	...
	30	....	...

copper

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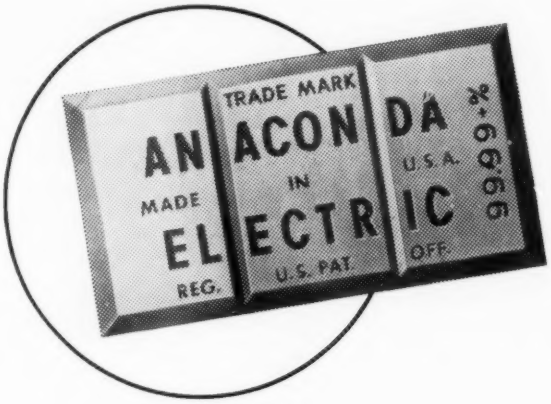

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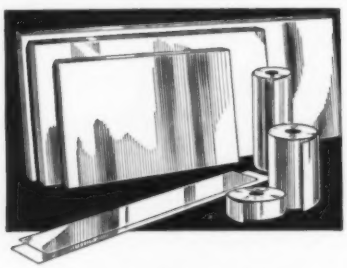

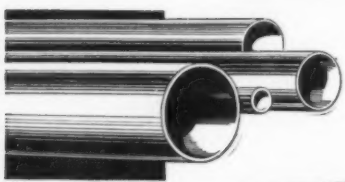

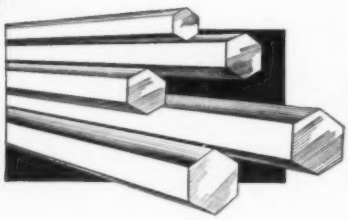

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